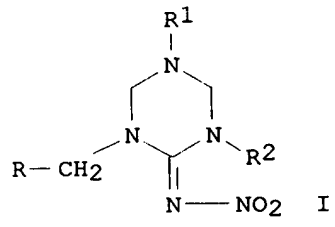
```
=> s l1

SAMPLE SEARCH INITIATED 10:11:33 FILE 'MARPAT'
SAMPLE SCREEN SEARCH COMPLETED -     71 TO ITERATE
100.0% PROCESSED      71 ITERATIONS                          2 ANSWERS
SEARCH TIME: 00.00.09

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          915 TO     1925
PROJECTED ANSWERS:               2 TO      125

L2             2 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 10:11:48 FILE 'MARPAT'
FULL SCREEN SEARCH COMPLETED -   1426 TO ITERATE
 85.0% PROCESSED    1212 ITERATIONS                         74 ANSWERS
 98.5% PROCESSED    1405 ITERATIONS                         80 ANSWERS
100.0% PROCESSED    1426 ITERATIONS                         80 ANSWERS
SEARCH TIME: 00.00.46

L3             80 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS                        SINCE FILE      TOTAL
                                              ENTRY     SESSION
FULL ESTIMATED COST                            85.70       86.15

FILE 'CAPLUS' ENTERED AT 10:13:40 ON 13 NOV 1999
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 1999 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.

FILE COVERS 1967 - 13 Nov 1999  VOL 131 ISS 21
FILE LAST UPDATED: 12 Nov 1999  (19991112/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

  This file supports REGlstRY for direct browsing and searching of
  all substance data from the REGISTRY file.  Enter HELP FIRST for
  more information.


=> s l3

L4             80 L3

=> s l4 and process
```

```
      1206965 PROCESS
L5          3 L4 AND PROCESS

=> s l4 and halogen?

        93997 HALOGEN?
L6          2 L4 AND HALOGEN?

=> s l4 and thiazol?

        29329 THIAZOL?
L7         33 L4 AND THIAZOL?

=> s l7 and process

      1206965 PROCESS
L8          2 L7 AND PROCESS

=> d l5 1-3 all


L5   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 1999 ACS
AN   1998:668115  CAPLUS
DN   129:290052
TI   Process for the preparation of nitroguanidine derivatives
     starting from 2-nitroiminohexahydro-1,3,5-triazines in the presence of
     ammonia, primary or secondary amines
IN   Ebihara, Koichi; Ura, Daisuke; Miyamoto, Michihiko; Kaiho, Tatsuo
PA   Mitsui Chemicals, Inc., Japan
SO   Eur. Pat. Appl., 13 pp.
     CODEN: EPXXDW
DT   Patent
LA   English
IC   ICM  C07D213-61
     ICS  C07D277-32; C07D307-14
ICA  C07D401-06; C07D417-06; C07D407-06
CC   27-6 (Heterocyclic Compounds (One Hetero Atom))
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   EP 869120          A1   19981007      EP 1998-105850   19980331
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     CN 1197064          A    19981028      CN 1998-108267   19980331
     JP 11236381         A2   19990831      JP 1998-86842    19980331
PRAI JP 1997-80178     19970331
     JP 1997-82838     19970401
     JP 1997-223813    19970820
     JP 1997-258968    19970924
     JP 1997-347934    19971217
OS   MARPAT 129:290052
GI
```



I

AB Described is a **process**, as a substitute for hydrolysis, for prepg. a nitroguanidine deriv., RCH2NHC(:NNO2)NHR2 (R = 2-chloro-5-pyridyl, 2-chloro-5-thiazolyl, 2-, 3-tetrahydrofuryl, 2-methyl-4-tetrahydrofuryl; R2 = Me, allyl), which comprises treating a triazine, I (R1 = Me, benzyl, i-Pr, Et, t-Bu, cyclohexyl; R, R2 = same as above), with NH3, a primary amine or a secondary amine, or a salt thereof.

ST guanidine nitro prepn; iminohexahydrotriazine amination; triazine hydro aminative ring cleavage

IT 136516-18-2 165253-14-5 168688-97-9 195986-55-1 213967-55-6 214149-49-2 214149-50-5
RL: RCT (Reactant)
(aminative ring cleavage of)

IT 131748-47-5P 131748-59-9P 165252-70-0P 165253-05-4P 214149-48-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 1999 ACS

AN 1993:59590 CAPLUS

DN **118:59590**

TI Heterocyclic amidine derivatives [(heteroarylmethyl)nitroguanidine derivatives] and their use as pesticides (insecticides and acaricides)

IN Kristiansen, Odd; Gsell, Laurenz; Maienfisch, Peter

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 63 pp.
CODEN: EPXXDW

DT Patent

LA German

IC ICM C07D213-40
ICS C07D277-32; C07D213-61; C07D213-89; A01N043-40; A01N043-78; A01N047-42

CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 5

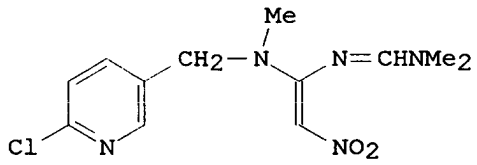
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 507736	A1	19921007	EP 1992-810225	19920326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT				
US 5223520	A	19930629	US 1992-858910	19920327
CA 2064920	AA	19921005	CA 1992-2064920	19920402
JP 05117237	A2	19930514	JP 1992-109199	19920402
AU 9214036	A1	19921008	AU 1992-14036	19920403
CN 1065456	A	19921021	CN 1992-102347	19920403
HU 60721	A2	19921028	HU 1992-1140	19920403
BR 9201197	A	19921201	BR 1992-1197	19920403
ZA 9202450	A	19930405	ZA 1992-2450	19920403

PRAI CH 1991-1004 19910404

OS CASREACT 118:59590; MARPAT 118:59590

GI



I

AB Some heterocyclic amidine derivs. and a **process** for their prepn. are claimed. The use of these compds. as pesticides (insecticides and acaricides) is claimed. Condensation of 1-amino-2-[[(2-chloro-5-pyridyl)methyl]methylamino]-2-nitroethene with DMF di-Et acetal gave the acyclic amidine I. I had activity against Nilaparvata lugens, Nephotettix

cincticeps, Bemisia tabaci and Ctenocephalides felis (flea; systemic).

ST heterocyclic amidine prepn pesticide; guanidine nitro heteroaylmethyl prepn insecticide acaricide; flea guanidine nitro heteroarylmethyl prepn

IT Acaricides
Insecticides
Pesticides
((heteroarylmethyl)nitroguanidine derivs.)

IT Ctenocephalides felis
Flea
(inhibition of, systemic, (heteroarylmethyl)nitroguanidine derivs. for)

IT 85297-80-9 120738-75-2 131748-49-7 145369-00-2 145369-01-3
RL: RCT (Reactant)
(condensation reaction of, with DMF di-Et acetal)

IT 1188-33-6, N,N-Dimethylformamide diethyl acetal
RL: RCT (Reactant)
(condensation reaction of, with [(chloropyridyl)methyl]methyl(nitro)guanidine)

IT 70258-18-3
RL: RCT (Reactant)
(condensation reaction of, with [(dimethylamino)methylene]methyl(nitro)guanidine)

IT 145368-93-0 145368-94-1
RL: RCT (Reactant)
(condensation reaction of, with chloro(chloromethyl)pyridine)

IT 14527-26-5
RL: RCT (Reactant)
(nitration of)

IT 2986-25-6P 145368-95-2P 145368-96-3P 145368-97-4P 145368-98-5P
145368-99-6P 145369-02-4P 145369-03-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate for (heteroarylmethyl)nitroguanidine (pesticide))

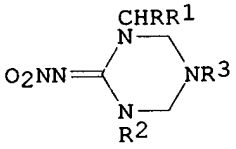
IT 144930-61-0P 144930-63-2P 144930-75-6P 145368-66-7P 145368-67-8P
145368-68-9P 145368-69-0P 145368-70-3P 145368-71-4P 145368-72-5P
145368-73-6P 145368-74-7P 145368-75-8P 145368-76-9P 145368-77-0P
145368-78-1P 145368-79-2P 145368-80-5P 145368-81-6P 145368-82-7P
145368-83-8P 145368-84-9P 145368-85-0P 145368-86-1P 145368-87-2P
145368-88-3P 145368-89-4P 145368-90-7P 145368-91-8P 145368-92-9P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as pesticide)

IT 765-30-0, Cyclopropylamine
RL: RCT (Reactant)
(reaction of, with S-methyl-N-nitroisothiourea)

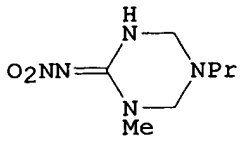
L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 1999 ACS
AN 1992:426353 CAPLUS
DN **117:26353**
TI **Process** for the preparation of nitroguanidine derivatives
IN Maienfisch, Peter; Kristiansen, Odd; Gsell, Laurenz
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 52 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C07D213-61
ICS A01N043-40; C07D213-40; C07D277-32; A01N043-78
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

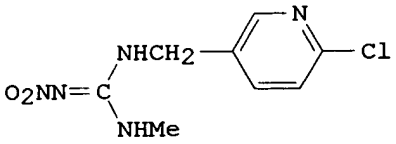
PI EP 483062 A2 19920429 EP 1991-810795 19911015
EP 483062 A3 19921028
EP 483062 B1 19960918
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL
ES 2091899 T3 19961116 ES 1991-810795 19911015
US 5245040 A 19930914 US 1991-777856 19911016
IL 99801 A1 19960723 IL 1991-99801 19911018
CA 2053954 AA 19920425 CA 1991-2053954 19911022
JP 04330049 A2 19921118 JP 1991-303960 19911023
PRAI CH 1990-3395 19901024
OS CASREACT 117:26353; MARPAT 117:26353
GI



I



II



III

AB O2NN:C(NHR2)NHCHRR1 (R = heterocyclic; R1 = H, alkyl; R2 = H, alkyl, aralkyl, cycloalkyl) were prepd. by hydrolyzing triazines I [R3 = (un)substituted alkyl, cycloalkyl, Ph, CH2Ph]. Thus, 17.1 g O2NN:C(NH2)NHMe was treated with PrNH2 and aq. CH2OH to give 26.9 g triazine II. Treatment of 20.1 g II with 16.2 g 2-chloro-5-chloromethylpyridine to give 17.4 g I (R = 2-chloro-5-pyridyl, R1, R2 = H, R3 = Pr) which (4.25 g) was hydrolyzed with HCl-MeOH to give 2.51 g nitroguanidine III.

ST nitroguanidine pyridylmethyl thiazolylmethyl; pyridylmethylnitroguanidine; thiazolylmethylnitroguanidine

IT 141856-78-2P 141856-84-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and hydrolysis of)

IT 141856-46-4P 141856-49-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with chloro(chloromethyl)pyridine)

IT 35089-65-7P 131748-47-5P 131748-50-0P 131748-53-3P 131748-56-6P
131748-59-9P 133258-61-4P 133258-65-8P 133258-66-9P 133258-70-5P
134323-25-4P 135018-04-1P 135018-10-9P 135018-11-0P 135018-14-3P
135018-15-4P 135018-16-5P 135018-17-6P 135018-18-7P 135018-19-8P
135018-20-1P 136516-16-0P 136516-17-1P 136516-18-2P 140920-89-4P
141856-47-5P 141856-48-6P 141856-50-0P 141856-51-1P 141856-52-2P
141856-53-3P 141856-54-4P 141856-55-5P 141856-56-6P 141856-57-7P
141856-58-8P 141856-59-9P 141856-60-2P 141856-61-3P 141856-62-4P
141856-63-5P 141856-64-6P 141856-65-7P 141856-66-8P 141856-67-9P
141856-68-0P 141856-69-1P 141856-70-4P 141856-71-5P 141856-72-6P
141856-73-7P 141856-74-8P 141856-75-9P 141856-76-0P 141856-77-1P
141856-79-3P 141856-80-6P 141856-81-7P 141856-82-8P 141856-83-9P
141856-85-1P 141856-86-2P 141856-87-3P 141856-88-4P 141856-89-5P
141856-90-8P 141856-91-9P 141856-92-0P 141856-93-1P 141856-94-2P
141856-95-3P 141856-96-4P 141856-97-5P 141856-98-6P 141856-99-7P
141857-00-3P 141857-01-4P 141857-02-5P 141857-03-6P 141857-04-7P
141857-05-8P 141857-06-9P 141857-07-0P 141857-08-1P 141857-09-2P
141857-10-5P 141857-11-6P 141857-12-7P 141857-13-8P 141857-14-9P
141857-15-0P 141857-16-1P 141857-17-2P 141857-18-3P 141857-19-4P

141857-20-7P 141857-21-8P 141857-22-9P 141857-23-0P 141857-24-1P
141857-25-2P 141857-26-3P 141857-27-4P 141857-28-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 556-88-7, Nitroguanidine 4245-76-5
RL: RCT (Reactant)
(reaction of, with amines and formaldehyde)

IT 62-53-3, Aniline, reactions 74-89-5, Methylamine, reactions 107-10-8, Propylamine, reactions
RL: RCT (Reactant)
(reaction of, with nitroguanidine and formaldehyde)

IT 50-00-0, Formaldehyde, reactions
RL: RCT (Reactant)
(reaction of, with nitroguanidines and amines)

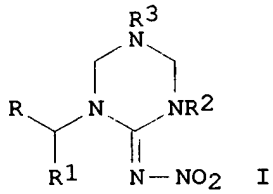
IT 70258-18-3, 2-Chloro-5-chloromethylpyridine
RL: RCT (Reactant)
(reaction of, with nitroiminotriazacyclohexanes)

=> d l7 1-10 all

L7 ANSWER 1 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1999:136884 CAPLUS
DN **130:182487**
TI Preparation of insecticidal and acaricidal 2-nitroguanidines
IN Maienfisch, Peter
PA Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft Mbh
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C07D213-61
ICS C07D213-36; C07D277-32; C07D277-28; C07D213-89; C07D307-14; C07D261-10; C07D251-08; C07D403-04; C07D405-04; C07D417-12
CC 28-21 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9909009	A1	19990225	WO 1998-EP5248	19980818
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9893442	A1	19990308	AU 1998-93442	19980818

PRAI CH 1997-1951 19970820
WO 1998-EP5248 19980818
OS MARPAT 130:182487
GI



I

AB 2-Nitroguanidines RR1NHC(:NNO2)NHR2 [R = (un)substituted mono- or bibcyclic heterocyclic; R1 = H, alkyl; R2 = H, alkyl, cycloalkyl, (un)substituted benzyl, **thiazolylmethyl**, 3-pyridylmethyl] were prepd. by hydrolyzing a triazine I [R3 = (un)substituted C11-C22 alkyl, C7-C16-cycloalkly, C3-C20 alkenyl, C3-C20 alkynyl, NH2 aryl, heterocyclic]. Thus, 1-methyl-2-nitroguanidine was cyclized with octadecylamine and CH2O and treated with 2-chloro-5-chloromethylpyridine to give the triazine I [R = 2-chloro-5-pyridyl, R1 = H, R2 = Me, R3 = octadecyl] which was hydrolyzed with HCl in MeOH to give MeNHC(:NNO2)NHCH2R.

ST nitroguanidine prepn insecticide acaricide

IT Acaricides
Insecticides
(prepn. of insecticidal and acaricidal 2-nitroguanidines)

IT 131748-47-5P
RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of insecticidal and acaricidal 2-nitroguanidines)

IT 107-11-9, Allylamine 124-30-1, Octadecylamine 462-08-8, 3-Aminopyridine 4245-76-5 70258-18-3, 2-Chloro-5-chloromethylpyridine 105827-91-6, 2-Chloro-5-chloromethylthiazole 220620-28-0
RL: RCT (Reactant)
(prepn. of insecticidal and acaricidal 2-nitroguanidines)

IT 141856-64-6P 141857-04-7P 146270-52-2P 220620-11-1P 220620-12-2P 220620-13-3P 220620-14-4P 220620-15-5P 220620-16-6P 220620-17-7P 220620-18-8P 220620-19-9P 220620-20-2P 220620-21-3P 220620-22-4P 220620-23-5P 220620-24-6P 220620-25-7P 220620-26-8P 220620-27-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of insecticidal and acaricidal 2-nitroguanidines)

L7 ANSWER 2 OF 33 CAPLUS COPYRIGHT 1999 ACS

AN 1999:136883 CAPLUS

DN **130:182483**

TI Preparation of insecticidal and acaricidal 2-nitroguanidines

IN Maienfisch, Peter

PA Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft M.B.H.

SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2

DT Patent

LA German

IC ICM C07D213-40
ICS C07D213-61; C07D213-89; C07D261-08; C07D277-28; C07D277-32; C07D307-14; C07D251-08; C07D401-14; C07D405-14; C07D413-14; C07D417-14

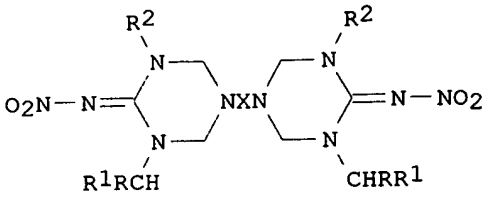
CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5

FAN.CNT 1

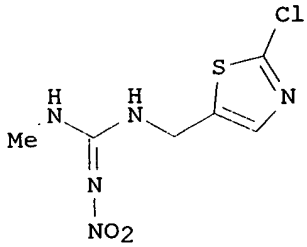
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9909008	A1	19990225	WO 1998-EP5166	19980814
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9893423	A1	19990308	AU 1998-93423	19980814
PRAI	CH 1997-1934		19970818		
	WO 1998-EP5166		19980814		

OS MARPAT 130:182483

GI



I



II

AB 2-Nitroguanidines R2NHC(:NNO2)NHCHRR1 [R = (un)substituted heterocyclic; R1 = H, alkyl; R2 = H, alkyl, cycloalkyl, (un)substituted CH2Ph, 3-pyridylmethyl, thienylmethyl] were obtained by hydrolyzing an alkylenebis(triazine) I [X = bond, alkylene, r3 = CHRR1]. Thus, 1-methyl-2-nitroguanidine was treated with ethylenediamine and CH2O to give the triazine I [X = CH2CH2, R3 = h] which was treated with 2-chloro-5-chloromethylthiazole to give I [R = 2-chloro-5-**thiazolylmethyl**, R1 = H, R2 = Me]. This latter compd. was treated with HCl in MeOH to give the nitroguanidine II.

ST nitroguanidine prepn insecticide acaricide; nitroiminotriazine alkylenebis

prepn hydrolysis

IT Acaricides
Insecticides
(prepn. of insecticidal and acaricidal 2-nitroguanidines)

IT 131748-47-5P 131748-59-9P 131768-13-3P 135018-17-6P
RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of insecticidal and acaricidal 2-nitroguanidines)

IT 107-15-3, 1,2-Diaminoethane, reactions 110-60-1, 1,4-Diaminobutane 4245-76-5 7300-34-7 70258-18-3, 2-Chloro-5-chloromethylpyridine 105827-91-6, 2-Chloro-5-chloromethylthiazole
RL: RCT (Reactant)
(prepn. of insecticidal and acaricidal 2-nitroguanidines)

IT 220618-03-1P 220618-04-2P 220618-05-3P 220618-06-4P 220618-07-5P 220618-08-6P 220618-09-7P 220618-10-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of insecticidal and acaricidal 2-nitroguanidines)

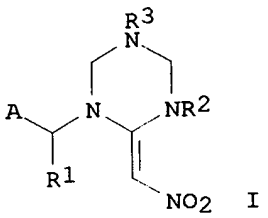
L7 ANSWER 3 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1999:7970 CAPLUS
DN **130:52438**
TI Method for producing nitroguanidine derivatives
IN Maienfisch, Peter; Widmer, Hansjurg
PA Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft m.b.H.
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C07D213-61

ICS C07D213-89; C07D307-14; C07D277-28; C07D403-06
CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9856764	A1	19981217	WO 1998-EP3358	19980605
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9884362	A1	19981230	AU 1998-84362	19980605

PRAI CH 1997-1423 19970609
WO 1998-EP3358 19980605
OS MARPAT 130:52438
GI



I

AB ACHR1NHC(NHR2):NNO2 [R1 = H, alkyl; R2 = H, alkyl, cycloalkyl, CH2B; A = (un)substituted arom. or non-arom. monocyclic or bicyclic or heterocyclic; B = Ph, 3-pyridyl or **thiazolyl** which are optionally substituted by one to three substituents] were prepd. by hydrolyzing a triazine I [R3 = (un)substituted alkyl, cycloalkyl, Ph, CH2Ph] at pH 7-14. The products are suitable as intermediates for the prodn. of pesticide mixts. Thus, I [A = 2-chloro-5-pyridyl, R1 = H, R2 = Me, R3 = Pr] was treated with NaHCO3 in aq. MeOH to give ACH2NHC(NHMe):NNO2.

ST nitroguanidine prepn pesticide intermediate; nitroiminotriazine hydrolysis

IT Pesticides
(prepn. of nitroguanidine derivs. from nitroiminotriazines as intermediates for pesticides)

IT 136516-19-3 141856-78-2 141856-79-3
RL: RCT (Reactant)
(prepn. of nitroguanidine derivs. from nitroiminotriazines as intermediates for pesticides)

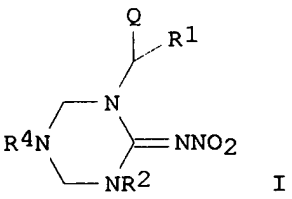
IT 131748-47-5P 131748-50-0P 131748-56-6P 131748-59-9P 135018-04-1P 135018-15-4P 135018-16-5P 135018-17-6P 135018-18-7P 135018-19-8P 135018-20-1P 140920-89-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of nitroguanidine derivs. from nitroiminotriazines as intermediates for pesticides)

L7 ANSWER 4 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1998:672535 CAPLUS
DN **129:275911**
TI Preparation of heterocyclyl-substituted nitroguandines.
IN Wollweber, Detlef; Kramer, Wolfgang; Rivadeneira, Eric
PA Bayer Aktiengesellschaft, Germany

SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C07D277-32
ICS C07D213-61; C07D405-06; C07D417-14
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9842690	A1	19981001	WO 1998-EP1456	19980313
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
DE 19712411	A1	19981001	DE 1997-19712411	19970325
AU 9872068	A1	19981020	AU 1998-72068	19980313

PRAI DE 1997-19712411 19970325
WO 1998-EP1456 19980313
OS CASREACT 129:275911; MARPAT 129:275911
GI



I

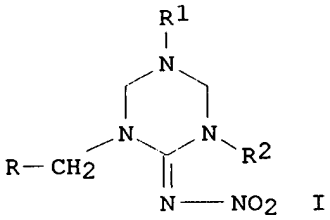
AB QR1CHNHC(:NNO2)NHR2 [R1 = H, alkyl; R2 = H, alkyl, cycloalkyl, CH2R3; R3 = alkenyl, alkynyl, Ph, cyanophenyl, nitrophenyl, halophenyl, pyridyl, **thiazolyl**, etc.; Q = (substituted) (arom.) mono- or bicyclic heterocyclyl], were prepd. by treatment of triazacyclohexanes [I; R4 = (substituted) alkyl, cycloalkyl, Ph, PhCH2, heterocyclylmethyl; other variables as above] with urea in the presence of solvent. Thus, 1-(2-chlorothiazol-5-ylmethyl)-2-nitroimino-3,5-dimethyl-1,3,5-triazacyclohexane was refluxed 8 h with urea in isobutanol to give 84% 1-(2-chlorothiazol-5-ylmethyl)-2-nitro-3-methylguanidine.
ST heterocyclylnitroguanidine prepn; guanidine heterocyclyl nitro prepn; chlorothiazolylmethylnitromethylguanidine prepn
IT 131748-59-9P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of heterocyclyl-substituted nitroguandines)
IT 617-89-0, Furfurylamine 4245-76-5 136516-19-3 213967-55-6
RL: RCT (Reactant)
(prepn. of heterocyclyl-substituted nitroguandines)
IT 213967-54-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of heterocyclyl-substituted nitroguandines)

L7 ANSWER 5 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1998:668115 CAPLUS
DN **129:290052**
TI Process for the preparation of nitroguanidine derivatives starting from 2-nitroiminohexahydro-1,3,5-triazines in the presence of ammonia, primary

or secondary amines
IN Ebihara, Koichi; Ura, Daisuke; Miyamoto, Michihiko; Kaiho, Tatsuo
PA Mitsui Chemicals, Inc., Japan
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D213-61
ICS C07D277-32; C07D307-14
ICA C07D401-06; C07D417-06; C07D407-06
CC 27-6 (Heterocyclic Compounds (One Hetero Atom))
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 869120	A1	19981007	EP 1998-105850	19980331
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1197064	A	19981028	CN 1998-108267	19980331
	JP 11236381	A2	19990831	JP 1998-86842	19980331
PRAI	JP 1997-80178	19970331			
	JP 1997-82838	19970401			
	JP 1997-223813	19970820			
	JP 1997-258968	19970924			
	JP 1997-347934	19971217			

OS MARPAT 129:290052
GI



I

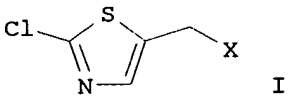
AB Described is a process, as a substitute for hydrolysis, for prepg. a nitroguanidine deriv., RCH2NHC(:NNO2)NHR2 (R = 2-chloro-5-pyridyl, 2-chloro-5-**thiazolyl**, 2-, 3-tetrahydrofuryl, 2-methyl-4-tetrahydrofuryl; R2 = Me, allyl), which comprises treating a triazine, I (R1 = Me, benzyl, i-Pr, Et, t-Bu, cyclohexyl; R, R2 = same as above), with NH3, a primary amine or a secondary amine, or a salt thereof.
ST guanidine nitro prepn; iminohexahydrotriazine amination; triazine hydro aminative ring cleavage
IT 136516-18-2 165253-14-5 168688-97-9 195986-55-1 213967-55-6 214149-49-2 214149-50-5
RL: RCT (Reactant)
(aminative ring cleavage of)
IT 131748-47-5P 131748-59-9P 165252-70-0P 165253-05-4P 214149-48-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L7 ANSWER 6 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1998:527323 CAPLUS
DN **129:136162**
TI Preparation of **thiazole** derivatives.
IN Pitterna, Thomas; Maienfisch, Peter; Wadsworth, David John; Gsell, Laurenz; Rapold, Thomas; Szczepanski, Henry
PA Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft m.b.H.
SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D277-32
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9832747	A1	19980730	WO 1998-EP297	19980120
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9862929	A1	19980818	AU 1998-62929	19980120

PRAI CH 1997-134 19970122
WO 1998-EP297 19980120
OS CASREACT 129:136162; MARPAT 129:136162
GI



I

AB Title compds. (I; X = leaving group) were prepd. by (a) reacting 2-chloro-5-hydroxymethylthiazole with a sulfonylating agent to give I [X = OSO2A; A = alkyl, hydroxyalkyl, alkenyl, alkynyl, (substituted) aryl, etc.], or (b) reacting 2-chloro-5-chloromethylthiazole with an iodinating agent, preferably NaI to give I (X = iodo), or (c) reacting 2-chloro-5-methylthiazole with a brominating agent to give I (X = Br), etc. Thus, 2-chloro-5-methylthiazole was refluxed with dibenzoyl peroxide and NBS in CCl4 to give 5-bromomethyl-2-chlorothiazole.

ST **thiazole** deriv prepn; halomethylchlorothiazole prepn; chlorothiazole halomethyl prepn

IT 210576-58-2P 210576-61-7P 210576-65-1P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **thiazole** derivs.)

IT 7143-01-3, Methanesulfonic anhydride 33342-65-3, 2-Chloro-5-methylthiazole 153719-38-1 192439-48-8
RL: RCT (Reactant)
(prepn. of **thiazole** derivs.)

IT 105827-91-6P, 2-Chloro-5-chloromethylthiazole 145015-15-2P, 2-Chloro-5-hydroxymethylthiazole
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **thiazole** derivs.)

IT 105829-23-0P 105843-36-5P 111988-48-8P 153719-23-4P 153719-32-5P 153719-33-6P 171103-04-1P 209548-61-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **thiazole** derivs.)

L7 ANSWER 7 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1998:424238 CAPLUS
DN **129:81723**
TI Preparation of **thiazoles**
IN Pitterna, Thomas; Szczepanski, Henry; Maienfisch, Peter; Huter, Ottmar

Franz; Rapold, Thomas; Senn, Marcel; Gobel, Thomas; O'Sullivan, Anthony Cornelius

PA Novartis A.-G., Switz.; Pitterna, Thomas; Szczepanski, Henry; Maienfisch, Peter; Huter, Ottmar Franz; Rapold, Thomas; Senn, Marcel; Gobel, Thomas; O'Sullivan, Anthony Cornelius

SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D277-32
ICS C07D277-16

CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))

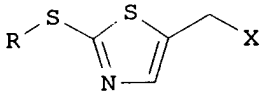
FAN.CNT 1

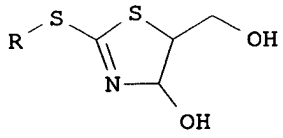
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9827075	A1	19980625	WO 1997-EP7088	19971217
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9862056	A1	19980715	AU 1998-62056	19971217
EP 946532	A1	19991006	EP 1997-954817	19971217
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE, FI				

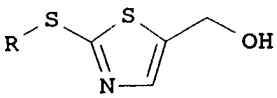
PRAI CH 1996-3125 19961219
WO 1997-EP7088 19971217

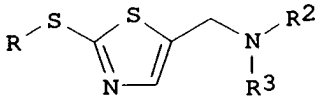
OS MARPAT 129:81723

GI


I


II


III


IV

AB The title compds. [I; R = (un)substituted C1-12 alkyl, C2-4 alkenyl, C2-4 alkynyl, etc.; X = a leaving group] were prepd. by a) reacting the **thiazoline** II with a water-removing reagent; or b) reacting alc. III with a halogenating or a sulfonylating agent to form I [X = halo, sulfonate]; or c) reacting amine IV [R2, R3 = H, C1-6 alkyl, C3-6 cycloalkyl, Ph, PhCH2] with haloC(O)OC1-8alkyl, haloC(O)Oaryl or haloC(O)OCH2Ph to obtain I [X = halo].

ST **thiazole** prepn

IT 209473-20-1P 209473-21-2P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **thiazoles**)

IT 192439-48-8P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP

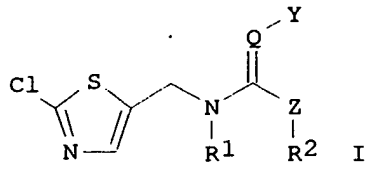
(Preparation)
(prepn. of **thiazoles**)

IT 100-39-0, Benzyl bromide 765-34-4, Oxiranecarboxaldehyde 54895-19-1
90197-29-8 209473-22-3
RL: RCT (Reactant)
(prepn. of **thiazoles**)

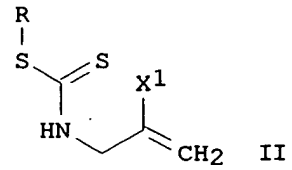
L7 ANSWER 8 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1998:424237 CAPLUS
DN **129:95484**
TI Preparation of **thiazoles**
IN Pitterna, Thomas; Szczepanski, Henry; Maienfisch, Peter; Huter, Ottmar Franz; Rapold, Thomas; Senn, Marcel; Gobel, Thomas; O'Sullivan, Anthony Cornelius; Seifert, Gottfried
PA Novartis A.-G., Switz.
SO PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D277-32
ICS C07D277-16; C07D417-06; C07D277-36
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9827074	A1	19980625	WO 1997-EP7087	19971217
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9857592	A1	19980715	AU 1998-57592	19971217
EP 946531	A1	19991006	EP 1997-953841	19971217
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE, FI				
ZA 9711358	A	19980708	ZA 1997-11358	19971218

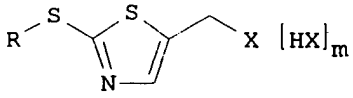
PRAI CH 1996-3124 19961219
WO 1997-EP7087 19971217
OS CASREACT 129:95484; MARPAT 129:95484
GI



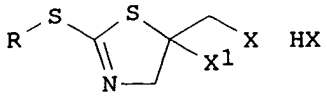
I



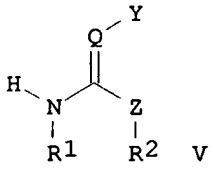
II



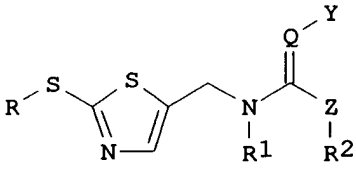
III



IV



V



VI

AB The title compds. [I; Q = CH, N; Y = NO2, CN; Z = CHR3, O, NR3, S; R1, R2 = H, (un)substituted C1-6 alkyl; R1R2 = alkylene which may addnl. contain a hetero atom selected from the group consisting of NR5, O and S; R3 = H, (un)substituted C1-12 alkyl] were prepd. by a) reacting dithiocarbamate II [R = (un)substituted C1-12 alkyl, C2-4 alkenyl, C2-4 alkynyl, etc.; X1 = a leaving group)] with a halogenating agent to form **thiazole** III [X = halo; m = 0-1], or by b) converting II by means of a halogenating agent into **thiazoline** IV, optionally c) converting IV into III, d) reacting III with the compd. V to form **thiazole** VI, e) or reacting IV with V to form **thiazole** VI, and f) treatment of compd. VI with chlorinating agent.

ST **thiazole** prepn

IT 192439-34-2P 192439-36-4P 192439-37-5P 192439-38-6P 192439-39-7P
192439-40-0P 192439-46-6P 192439-47-7P 192439-48-8P 192723-46-9P
209548-64-1P 209548-65-2P 209548-66-3P 209548-67-4P 209548-68-5P
209548-69-6P 209548-70-9P 209548-71-0P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **thiazoles**)

IT 105829-23-0P 105843-36-5P 111988-48-8P 153719-23-4P 153719-32-5P
153719-33-6P 171103-04-1P 209548-61-8P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of **thiazoles**)

IT 100-53-8, Benzyl mercaptan 14214-31-4, 2-Chloroallyl isothiocyanate 153719-38-1
RL: RCT (Reactant)
(prepn. of **thiazoles**)

L7 ANSWER 9 OF 33 CAPLUS COPYRIGHT 1999 ACS

AN 1997:739397 CAPLUS

DN **128:44936**

TI Systemic pesticide composition and method for treating citrus during pruning or grafting

IN Mizobe, Shinji; Miyata, Akiyoshi; Saito, Kenji

PA Nippon Soda Co., Ltd., Japan; Yamaguchi Prefecture
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A01N033-18
ICS A01G007-06; A01N037-20; A01N037-26; A01N037-34; A01N037-52; A01N043-40; A01N043-50; A01N043-68; A01N043-78; A01N047-40; A01N047-42; A01N047-44; C08L031-04
CC 5-4 (Agrochemical Bioregulators)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09291002	A2	19971111	JP 1996-354437	19961219

PRAI JP 1996-69290 19960229
OS MARPAT 128:44936
AB A compn. for controlling pests on citrus fruits contains a systemic insecticide (I) of the formula RNAC(:YX)B at 0.1-10% by wt. and a vinyl acetate-type polymer; the compn. is applied to the cut surface in pruning or injected into grafts. In I, R = H, formyl, acetyl, C1-4 alkyl, 2-chloro-5-pyridylmethyl, or 2-chloro-5-**thiazolylmethyl**; A = H, C1-4 alkyl, or is bonded with B to form, e.g., an ethylene group; B = C1-4 alkyl, SR2 (R2 = C1-4 alkyl), etc.; Y = N or CR3 (R3 = H or C1-4 alkyl); X = nitro or cyano. Such formulations may also contain a systemic antimicrobial agent. Thus, applying a compn. contg. acetamiprid 2, vinyl acetate adhesive 80, and surfactant, etc. 18% to the cut surface of a Citrus unshiu branch prevented damage by citrus leaf miner.
ST insecticide formulation pest control citrus; fungicide insecticide formulation citrus; chloronicotinyl insecticide formulation citrus
IT Pesticide formulations
(contg. systemic insecticides for citrus treatment during pruning or grafting)
IT Phyllocnistis citrella
(pesticide compns. and method for controlling leaf miner damage)
IT Binders
Citrus
Grafting (biological)
Satsuma
(pesticide compns. and method for treating citrus during pruning or grafting)
IT Fungicides
(systemic fungicides; pesticide compns. and method for treating citrus during pruning or grafting)
IT Insecticides
(systemic; pesticide compns. and method for treating citrus during pruning or grafting)
IT 9003-20-7, Vinyl acetate resin
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(pesticide compns. and method for treating citrus during pruning or grafting)
IT 23564-05-8, Topsin M 138261-41-3, Imidacloprid 160430-64-8, Acetamiprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BIOL (Biological study); USES (Uses)
(pesticide compns. and method for treating citrus during pruning or grafting)

L7 ANSWER 10 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1997:429424 CAPLUS
DN **127:46495**
TI Insect pest control method using liquid containing nonorganophosphorus insecticide
IN Sekiyama, Atsuo

PA Takeda Seiyaku K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A01N025-00
ICS A01N043-54; A01N043-62; A01N043-64
CC 5-4 (Agrochemical Bioregulators)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09124402	A2	19970513	JP 1995-303586	19951027

PI JP 09124402 A2 19970513 JP 1995-303586 19951027
OS MARPAT 127:46495
AB Before transplanting vegetable or flowering plant seedlings, .apprx.0.1-20 g/m2 of a pesticidal liq.is applied to the nursery bed; the liq. contains 200-2000 ppm of a permeable insecticide R1R2NCR3:YX (I), where R1 = H, C1-6 alkyl, formyl, C1-4 alkylcarbonyl, C6-10 arylcarbonyl, C1-4 alkylsulfonyl, or a C1-3 alkyl substituted with a 3-6-membered heterocyclic group contg. N; R2 = H, hydrocarbon group, divalent group bonded with R3; R3 = hydrocarbon group, SR4 or NR5R6 (R4, R5, and R6 have the same meanings as R1) , or R3 is bonded with R2; Y = N, CH, hydrocarbon group; X = electron-withdrawing group. By applying a high rate of I, complete control can be achieved for .gtoreq.1 mo, and labor can be decreased markedly by giving seedlings water in which the insecticide is mixed during irrigation. Thus, applying 30 mL/seedling of a liq. contg. 333 ppm N-(2-chloro-5-**thiazolylmethyl**)-N'-methyl-N''-nitroguanidine, 1 day before planting, completely controlled cotton aphid for 41 days.
ST insecticide nonorganophosphorus pest control seedling transplanting; **thiazolylmethyl** nitroguanidine deriv cotton aphid control
IT Aphis gossypii
Flower
Insecticides
Seedling
Vegetable
(pest control in beds for transplanting vegetable or flowering plant seedlings with liq. contg. nonorganophosphorus insecticide)
IT 120738-89-8 131748-59-9 138261-41-3 160430-64-8
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BIOL (Biological study); USES (Uses)
(pest control in beds for transplanting vegetable or flowering plant seedlings with liq. contg. nonorganophosphorus insecticide)

=> d l7 11-20 all

L7 ANSWER 11 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1997:175073 CAPLUS
DN **126:171588**
TI Preparation of heteroarylmethylisoureas and related compounds.
IN Uneme, Hideki; Konobe, Masato; Ishizuka, Hitoshi; Kamiya, Yasuo
PA Takeda Chemical Industries, Ltd., Japan; Uneme, Hideki; Konobe, Masato; Ishizuka, Hitoshi; Kamiya, Yasuo
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D277-28
ICS C07D213-38; C07D209-48; C07C273-18; C07C275-70; C07C277-08; C07C279-36
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9700867	A1	19970109	WO 1996-JP1694	19960619
	W: AL, AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IL, IS, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2220094	AA	19970109	CA 1996-2220094	19960619
	AU 9661374	A1	19970122	AU 1996-61374	19960619
	CN 1188475	A	19980722	CN 1996-194977	19960619
	EP 873325	A1	19981028	EP 1996-918850	19960619
	R: CH, DE, ES, FR, GB, IT, LI, PT				
	BR 9608892	A	19990615	BR 1996-8892	19960619
	JP 09067342	A2	19970311	JP 1996-162230	19960621
	JP 10120666	A2	19980512	JP 1996-304542	19961115
PRAI	JP 1995-158199	19950623			
	JP 1995-300278	19951117			
	WO 1996-JP1694	19960619			
	JP 1996-226595	19960828			

OS CASREACT 126:171588; MARPAT 126:171588

AB Q(CH2)nNR2C(OR1):NX [R1 = (substituted) hydrocarbyl; R2 = H, (substituted) hydrocarbyl; Q = (substituted) heterocyclyl; X = electron attracting group; n = 0, 1], were prepd. by (A) reacting R1O(N2N)C:NX (I) with Q(CH2)nNHR2 (II) or (B) reacting I with Y1COACOY2 (Y1, Y2 = leaving group) followed by treatment of the product with II. Thus, O-methyl-N-nitro-N'-phthaloylisourea (prepn. given) in MeOH was treated over 15 min. with 5-aminomethyl-2-chlorothiazole at 0.degree. and the mixt. was stirred 30 min. at room temp. to give 85% O-methyl-N-(2-chloro-5-**thiazolylmethyl**)-N'-nitroisourea. The latter in H2O was treated dropwise with aq. MeNH2 followed by stirring for 14 h at room temp. to give 92% 1-(2-chloro-5-**thiazolylmethyl**)-3-methyl-2-nitroguanidine.

ST **thiazolylmethylnitrosoisourea** prepn; heteroarylmethylisourea prepn; pyridylmethylnitroguanidine prepn

IT 187149-02-6P 187149-03-7P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of heteroarylmethylisoureas and related compds.)

IT 131748-47-5P 131748-59-9P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of heteroarylmethylisoureas and related compds.)

IT 74-89-5, Methylamine, reactions 88-95-9, Phthaloyl chloride 24285-39-0, O-Methylisourea sulfate 97004-04-1, 5-Aminomethyl-2-chloropyridine 120740-08-1, 5-Aminomethyl-2-chlorothiazole
RL: RCT (Reactant)
(prepn. of heteroarylmethylisoureas and related compds.)

IT 57538-27-9P 187149-01-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of heteroarylmethylisoureas and related compds.)

L7 ANSWER 12 OF 33 CAPLUS COPYRIGHT 1999 ACS

AN 1995:957959 CAPLUS

DN **124:8836**

TI Substituted 1,2,3,4-tetrahydro-5-nitropyrimidines and their preparation and use as pesticides

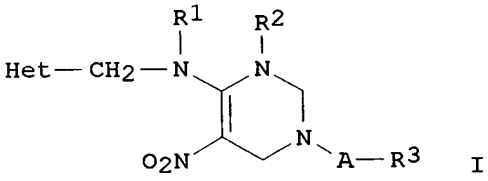
IN Krueger, Bernd-Wieland; Uhr, Hermann; Kanellakopulos, Johannes; Gesing, Ernst R. F.; Wolf, Hilmar; Turberg, Andreas; Mencke, Norbert; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Hartwig, Juergen

PA Bayer A.-G., Germany

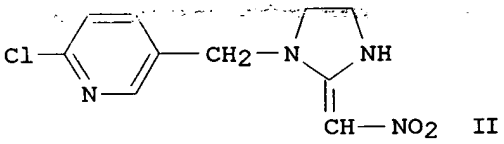
SO Ger. Offen., 28 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C07D417-12
ICS C07D401-12; C07D487-04; C07D498-06; A01N043-90; A01N043-54; A01N047-12; A01N047-18; A01N047-10; A01N047-28
ICI C07D417-12, C07D239-06, C07D277-32; C07D401-12, C07D213-61, C07D239-06; C07D487-04, C07D239-00, C07D233-00; C07D487-04
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4401635	A1	19950727	DE 1994-4401635	19940121
WO 9519977	A1	19950727	WO 1995-EP58	19950109
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9514161	A1	19950808	AU 1995-14161	19950109
AU 697889	B2	19981022		
EP 740666	A1	19961106	EP 1995-905616	19950109
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
CN 1138860	A	19961225	CN 1995-191285	19950109
JP 09507670	T2	19970805	JP 1995-519313	19950109
BR 9506532	A	19970916	BR 1995-6532	19950109
ZA 9500462	A	19950928	ZA 1995-462	19950120
US 5869491	A	19990209	US 1996-676272	19960712

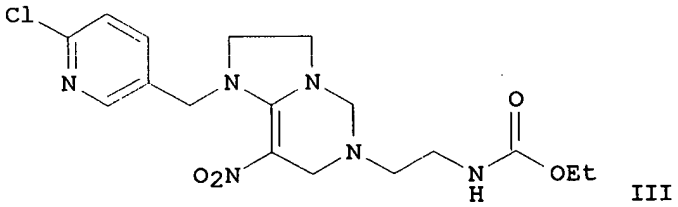
PRAI DE 1994-4401635 19940121
WO 1995-EP58 19950109
OS CASREACT 124:8836; MARPAT 124:8836
GI



I



II



III

AB Title compds. are claimed, specifically I [Het = (un)substituted pyridyl or **thiazolyl**; R1, R2 = C1-4 alkyl; or R1R2 form (un)substituted

satd. 5- or 6-membered ring with optional O or N atoms; A = (un)substituted alkylene or cycloalkylene, the former optionally interrupted by O, S, alkylimino, or arylimino; R3 = OC(:X)R6, NR7C(:X)R6, SC(:X)R6; R6 = (un)substituted alkyl, cycloalkyl, alkenyl, aryl, (di)(alkyl)amino, etc.; X = O, S; R7 = H, C1-4 alkyl]. The compds. are useful as pesticides and ectoparasiticides, and esp. as insecticides. For example, cyclocondensation of (chloropyridinylmethyl)(nitromethylene)imidazolidine II with H2NCH2CH2NHCO2Et and formaldehyde in refluxing EtOH gave 82% title compd. III. In an in vitro test against Ctenocephalides felis, III showed 100% activity at 10 ppm. Addnl. biol. and synthetic examples are given.

ST tetrahydronitropyrimidine prepn pesticide; pyrimidine tetrahydronitro prepn ectoparasiticide; imidazolidinopyrimidine prepn insecticide acaricide nematocide

IT Acaricides
Insecticides
Nematocides
Pesticides
(prepn. of tetrahydronitropyrimidine derivs. as pesticides)

IT Parasiticides
(ecto-, prepn. of tetrahydronitropyrimidine derivs. as pesticides)

IT 113044-83-0P 170982-30-6P 170982-31-7P 170982-32-8P 170982-33-9P 170982-34-0P 170982-35-1P 170982-36-2P 170982-37-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(intermediate; prepn. of tetrahydronitropyrimidine derivs. as pesticides)

IT 170982-15-7P 170982-16-8P 170982-17-9P 170982-18-0P 170982-19-1P 170982-20-4P 170982-21-5P 170982-22-6P 170982-23-7P 170982-24-8P 170982-25-9P 170982-26-0P 170982-27-1P 170982-28-2P 170982-29-3P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of tetrahydronitropyrimidine derivs. as pesticides)

IT 50-00-0, Formaldehyde, reactions 78-96-6, 1-Amino-2-propanol 108-24-7, Acetic anhydride 111-36-4, n-Butyl isocyanate 156-87-6, 3-Amino-1-propanol 36553-29-4 101336-63-4 120738-89-8
RL: RCT (Reactant)
(starting material; prepn. of tetrahydronitropyrimidine derivs. as pesticides)

L7 ANSWER 13 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1994:191147 CAPLUS
DN **120:191147**
TI Preparation of nitroguanidines as agrochemicals
IN Aoki, Isao; Minamida, Isao
PA Takeda Chemical Industries Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07C275-70
ICS C07C277-00; C07C279-34; C07C279-36; C07C335-40; C07D213-75; C07D241-20; C07D265-06; C07D277-28; C07D277-32; C07D277-34; C07D333-36; C07D417-12
ICA C07D279-06
CC 23-20 (Aliphatic Compounds)
Section cross-reference(s): 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 05112521	A2	19930507	JP 1991-130805	19910322

OS MARPAT 120:191147

AB L-NH-A-G-C(NNO2)-NR2R1 [I; R1 = H, (un)substituted hydrocarbyl; R2 = H, (un)substituted hydrocarbyl, (CH2)n-Y; Y = (un)substituted hydrocarbyl, substituted heterocyclyl; n = 1, 2; R1R2N = part of a ring; A = (un)substituted alkylene; G = O, S; L = electron-withdrawing group] are prepd. A mixt. of 2-(nitroimino)-3-(p-tolylsulfonyl)tetrahydro-4H-1,3-thiazine and 2-(2-chlorophenyl)ethylamine in CHCl3 was stirred at room temp. for 1 h to give I [L = p-tolylsulfonyl, A = (CH2)3, G = S, R1 = H, R2 = o-chlorophenethyl]. I were active as pesticides at 1-1000 ppm, preferably at 1-500 ppm. I may be used as herbicides, acaricides, insecticides, fungicides, etc. (no data).

ST nitroguanidine prepn agrochem; guanidine nitro prepn agrochem

IT Agrochemicals
(nitroguanidines)

IT 35089-65-7P 101250-97-9P 131748-47-5P 131748-48-6P 131748-49-7P
131748-50-0P 131748-51-1P 131748-53-3P 131748-55-5P 131748-56-6P
131748-58-8P 131748-59-9P 131748-60-2P 131748-61-3P 131748-65-7P
131748-69-1P 131748-70-4P 131748-71-5P 131748-72-6P 131748-73-7P
131748-74-8P 131748-75-9P 131748-76-0P 131748-77-1P 131748-78-2P
131748-85-1P 131748-86-2P 131768-12-2P 131768-13-3P 135018-15-4P
137589-63-0P 138149-89-0P 138149-90-3P 138149-92-5P 138149-95-8P
141205-36-9P 141205-38-1P 141205-39-2P 141205-40-5P 141205-44-9P
141205-46-1P 141205-49-4P 141205-50-7P 141205-51-8P 141205-52-9P
141205-53-0P 141205-54-1P 141205-56-3P 141205-57-4P 141205-58-5P
141205-60-9P 141205-61-0P 141205-63-2P 141205-64-3P 141205-65-4P
141205-66-5P 141205-67-6P 141205-68-7P 141205-69-8P 141205-70-1P
141205-71-2P 141205-72-3P 141205-73-4P 141205-74-5P 141205-76-7P
141205-77-8P 141205-78-9P 141205-79-0P 141205-80-3P 141205-81-4P
141205-82-5P 141205-83-6P 141205-84-7P 141227-31-8P 141227-32-9P
141227-33-0P 141227-34-1P 150221-67-3P 150221-68-4P 150221-69-5P
150221-70-8P 150221-71-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as agrochem.)

IT 150221-72-0P,
2-(Nitroimino)-3-(p-tolylsulfonyl)tetrahydro-4H-1,3-thiazine
150221-73-1P 150221-76-4P 150221-77-5P 150221-78-6P 150221-79-7P
150221-80-0P 150221-82-2P 150221-84-4P 150221-85-5P 150221-86-6P
150221-89-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate for agrochems.)

IT 98-59-9, p-Toluenesulfonyl chloride 107-10-8, Propylamine, reactions
124-63-0, Methanesulfonyl chloride 1848-68-6,
2-Amino-5,6-dihydro-4H-1,3-
oxazine 1885-14-9, Phenyl chlorocarbonate 7073-36-1,
2-Chloro-4-nitrobenzoyl chloride 13078-80-3, 2-(2-
Chlorophenyl)ethylamine 27757-85-3, 2-Aminomethylthiophene 30480-64-9
97004-04-1 105827-90-5, 2-Nitroiminothiazolidine 120740-08-1,
(2-Chloro-5-**thiazolyl**)methylamine 150221-75-3,
2-Nitroimino-3-(phenylsulfonyl)**thiazolidine** 150221-81-1
150221-83-3, 2-Imino-3-phenylsulfonylthiazolidine 150221-87-7,
2-Nitroiminotetrahydro-4H-1,3-thiazine 150221-88-8, 2-
Nitroiminotetrahydro-4H-1,3-oxazine
RL: RCT (Reactant)
(reaction of, in prepn. of agrochems.)

L7 ANSWER 14 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1994:127812 CAPLUS
DN **120:127812**
TI Termite-proofing agent
IN Matsuda, Michihiko; Hatano, Renpei; Yano, Makio
PA Nippon Soda Co., Ltd., Japan
SO PCT Int. Appl., 11 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM A01N047-40

ICS A01N051-00
CC 5-4 (Agrochemical Bioregulators)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9325080	A1	19931223	WO 1993-JP755	19930604
	W: AU, BR, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9343545	A1	19940104	AU 1993-43545	19930604
	AU 670441	B2	19960718		
	JP 06056612	A2	19940301	JP 1993-158177	19930604
	EP 651945	A1	19950510	EP 1993-913481	19930604
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE				
	BR 9306540	A	19980915	BR 1993-6540	19930604
PRAI	JP 1992-177395	19920611			
	WO 1993-JP755	19930604			

OS MARPAT 120:127812
AB A termite-proofing agent contg. at least either a compd. represented by general formula I (R1CH2NR2CR3:NR4) or a salt thereof as the active ingredient, wherein R1 represents pyridyl, pyrazinyl or **thiazolyl** each of which may be substituted; R2 represents H, optionally substituted alkyl, cycloalkyl or alkoxy; R3 represents H or optionally substituted alkyl; and R4 represents cyano or NO2.
ST termite control amine deriv
IT Insecticides
(amine derivs., for termite control)
IT Termite
(control of, amine derivs. for)
IT Agrochemical formulations
(insecticide-contg., for termite control)
IT 135410-03-6 135410-19-4 135410-20-7 135410-21-8 135410-40-1
135410-42-3 135410-43-4 135410-52-5 135410-60-5 135410-81-0
135410-83-2 135410-92-3 136479-54-4
RL: BIOL (Biological study)
(insecticide compns. contg., for termite control)

L7 ANSWER 15 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1993:580670 CAPLUS
DN **119:180670**
TI Preparation of guanidine containing heterocycles as insecticides
IN Tsuboi, Shinichi; Moriya, Koichi; Hattori, Yumi; Sone, Shinzaburo; Shibuya, Katsuhiko
PA Nihon Bayer Agrochem K.K., Japan
SO Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D213-61
ICS C07D277-32; C07D261-10; A01N043-40; A01N043-78; A01N043-80
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 547451	A1	19930623	EP 1992-120735	19921204
	EP 547451	B1	19970305		
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
	JP 05163242	A2	19930629	JP 1991-352861	19911217
	ES 2097856	T3	19970416	ES 1992-120735	19921204
	US 5304564	A	19940419	US 1992-987510	19921207
	ZA 9209716	A	19930614	ZA 1992-9716	19921215
	BR 9205027	A	19930622	BR 1992-5027	19921216
	CN 1073678	A	19930630	CN 1992-114469	19921217
	CN 1037737	B	19980318		
	HU 63306	A2	19930830	HU 1992-3996	19921217

US 5472971 A 19951205 US 1994-182957 19940118
PRAI JP 1991-352861 19911217
US 1992-987510 19921207
OS MARPAT 119:180670
AB Title compds. ZCHR1NH(CH2)nNR2C(:NY)NR3R4 (I; Z = 2-chloro-5-pyridyl, 2-chloro-5-**thiazolyl**, 3-chloro-5-isoxazolyl; R1 = H, C1-4 alkyl; R2 = H, C1-4 alkyl, C3-4 alkenyl, C3-4 alkynyl, 2-chloro-5-pyridylmethyl; R3, R4 = H, halo, C1-4 alkyl, C3-4 alkenyl, C3-4 alkynyl, (substituted) PhCH2, etc.; Y = O2N, NC; n = 2,3), are prepd. N-(6-chloro-3-pyridylmethyl)ethylenediamine, MeSC(:NNO2)NH2 and EtOH were stirred at 30.degree. until MeSH ceased to be generated to give I (Z = 6-chloro-3-pyridyl, R1 = R2 = R3 = R4 = H, Y = O2N, n = 2) (II). In test on plant hoppers planted on rice plant, II at 200 ppm gave 100% control.
ST heterocyclyl guanidine prepn insecticide
IT Insecticides
(guanidine contg. heterocycles)
IT 150312-16-6P 150433-40-2P 150433-41-3P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)
IT 2986-25-6 101990-44-7
RL: RCT (Reactant)
(reaction of, in prepn. of insecticides)

L7 ANSWER 16 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1993:533485 CAPLUS
DN **119:133485**
TI Heterocyclic nematocides and acaricides.
IN Matsuda, Michihiko; Takakusa, Nobuo; Yamamoto, Atsushi; Yano, Makio
PA Nippon Soda Co, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A01N047-40
ICS A01N051-00
CC 5-4 (Agrochemical Bioregulators)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05155722	A2	19930622	JP 1991-348450	19911205

OS MARPAT 119:133485
AB Nematocides and acaricides contain R1CH2NR2CR3:NR4 [I;R1 = (un)substituted pyridyl, pyrazinyl or **thiazolyl**; R2 = H, (un)substituted alkyl, cycloalkyl, alkoxy; R3 = H, (un)substituted alkyl; R4 = cyano, NO2] as active ingredients. I (R1 = 2-chloropyridin-5-yl, R2 = R3 = Me, R4 = cyano) 20, higher alc. sulfate ester 5, diatomaceous earth 70, and silica 5 parts were mixed to give a wettable powder, which showed higher nematocidal activity than cartap.
ST nematocide acaricide pyridine pyrazine **thiazole**
IT Acaricides
Nematocides
(pyridines and pyrazines and **thiazoles**)
IT 135410-20-7 135410-42-3 135410-81-0 135410-92-3 136479-54-4
RL: BIOL (Biological study)
(acaricide and nematocide)

L7 ANSWER 17 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1993:141817 CAPLUS
DN **118:141817**
TI Agrohorticultural insecticidal and bactericidal compositions containing amines.
IN Matsuda, Michihiko; Takakusa, Nobuo; Yamamoto, Atsushi; Iwasa, Takao;

Hashimoto, Sho
PA Nippon Soda Co., Ltd., Japan
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM A01N047-40
ICS A01N051-00
CC 5-2 (Agrochemical Bioregulators)
FAN.CNT 1

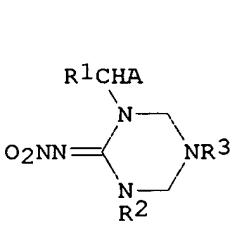
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9221241	A1	19921210	WO 1992-JP714	19920602
W: BR, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
JP 04360804	A2	19921214	JP 1991-159690	19910604
JP 04368304	A2	19921221	JP 1991-167426	19910613

PRAI JP 1991-159690 19910604
JP 1991-167426 19910613
OS MARPAT 118:141817
AB An amine deriv. (R1X)NR2CR3:NR4 (I)[R1 = (un)substituted pyridyl, pyrazyl,
thiazolyl; X = (un)substituted alkylene, alkylidene; R2 = H, (un)substituted alkyl, alkenyl, YR5, etc.; Y = O, CO; R3 = H, (un)substituted alkyl, cycloalkyl; R4 = cyano, nitro; R5 = (un)substituted alkyl, aryl] is an insecticide and bactericide in combination with an ergosterol biosynthesis inhibitor, like triflumizole. A I [R1 = 3-chloro-3-pyridiyl, X = CH2, R2 = Me, R3 = Me, R4 = CN] mixt. with triflumizole showed potent insecticidal activities.
ST insecticide bactericide triflumizole amine deriv
IT Bactericides, Disinfectants, and Antiseptics
Insecticides
(amine deriv. mixts. with ergosterol biosynthesis inhibitors)
IT 146543-66-0 146543-67-1 146543-68-2 146543-69-3 146543-70-6
146543-71-7 146543-72-8 146543-73-9 146543-74-0 146543-75-1
146543-76-2 146543-77-3 146543-78-4 146543-79-5 146543-80-8
146543-81-9 146570-99-2 146571-01-9 146571-02-0
RL: BIOL (Biological study)
(bactericide and insecticide)

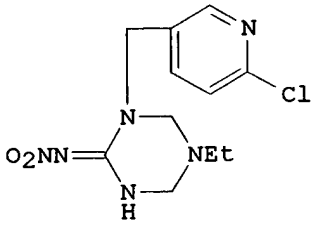
L7 ANSWER 18 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1992:469886 CAPLUS
DN **117:69886**
TI Preparation of 2-(nitroimino)-1,3,5-triazacyclohexane pesticides
IN Maienfisch, Peter; Kristiansen, Odd; Gsell, Laurenz
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 102 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C07D401-06
ICS C07D417-06; A01N051-00
ICI C07D401-06, C07D251-00, C07D213-00; C07D417-06, C07D277-00, C07D251-00
CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 483055	A1	19920429	EP 1991-810757	19910926
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
CN 1060468	A	19920422	CN 1991-109409	19910930
CA 2052731	AA	19920406	CA 1991-2052731	19911003
JP 04273863	A2	19920930	JP 1991-283521	19911003
BR 9104300	A	19920602	BR 1991-4300	19911004

PRAI CH 1990-3219 19901005
CH 1991-1648 19910604
OS MARPAT 117:69886
GI



I



II

AB Title compds. [I; R1 = H, alkyl; R2 = H, (cyclo)alkyl, CH2B; R3 = H, (substituted) (cyclo)alkyl alkenyl, alkynyl, Ph, PhCH2; A = (substituted) (arom.) (bicyclic) heterocyclyl; B = (substituted) Ph, pyridyl, **thiazolyl**], were prepd. Thus, 1-(2-chloropyrid-5-ylmethyl)-2-nitroguanidine, aq. H2CO, aq. EtNH2, and EtOH were heated at 50.degree. for 4 h to give title compd. II. II at 400 ppm gave >80% control of Myzus persicae.

ST nitroiminotriazacyclohexane prepn pesticide; insecticide nitroiminotriazacyclohexane; acaricide nitroiminotriazacyclohexane; triazacyclohexane nitroimino prepn pesticide

IT Acaricides
Insecticides
Pesticides
((nitroimino)triazacyclohexanes)

IT 134323-25-4P 136516-17-1P 136516-18-2P 141856-77-1P 141856-78-2P
141856-79-3P 141856-80-6P 141856-81-7P 141856-82-8P 141856-83-9P
141856-84-0P 141856-85-1P 141856-86-2P 141856-87-3P 141856-88-4P
141856-89-5P 141856-91-9P 141856-92-0P 141856-93-1P 141856-94-2P
141856-95-3P 141856-96-4P 141856-97-5P 141856-98-6P 141856-99-7P
141857-00-3P 141857-01-4P 141857-02-5P 141857-03-6P 141857-04-7P
141857-05-8P 141857-06-9P 141857-07-0P 141857-08-1P 141857-09-2P
141857-10-5P 141857-11-6P 141857-12-7P 141857-13-8P 141857-14-9P
141857-15-0P 141857-16-1P 141857-17-2P 141857-18-3P 141857-19-4P
141857-21-8P 141857-22-9P 141857-23-0P 142488-63-9P 142488-64-0P
142488-65-1P 142488-66-2P 142488-67-3P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as pesticide)

IT 133258-70-5P 136516-16-0P 141856-46-4P 141856-47-5P 141856-48-6P
141856-49-7P 141856-50-0P 141856-51-1P 141856-52-2P 141856-53-3P
141856-54-4P 141856-55-5P 141856-56-6P 141856-57-7P 141856-59-9P
141856-60-2P 141856-62-4P 141856-64-6P 141856-65-7P 141856-66-8P
141856-67-9P 141856-68-0P 141856-69-1P 141856-70-4P 141856-71-5P
141856-72-6P 141856-73-7P 141856-74-8P 141856-75-9P 141856-76-0P
142488-68-4P 142488-69-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as pesticide intermediate)

IT 50-00-0, Formaldehyde, reactions 74-89-5, Methylamine, reactions
107-10-8, Propylamine, reactions 556-88-7, 2-Nitroguanidine
4245-76-5,
1-Methyl-2-nitroguanidine
RL: RCT (Reactant)
(reaction of, in prepn. of (nitroamino)triazacyclohexane pesticide)

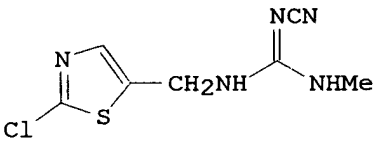
IT 75-04-7, Ethylamine, reactions 107-08-4, Propyl iodide 70258-18-3,

2-Chloro-5-chloromethylpyridine 131748-56-6
RL: RCT (Reactant)
(reaction of, in prepn. of pesticide)

L7 ANSWER 19 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1992:448540 CAPLUS
DN **117:48540**
TI Preparation of N-(**thiazolylalkyl**)-N'-cyanoguanidine or -S-methylisothiourea derivatives and analogs as insecticides
IN Ishimitsu, Keiichi; Kishimoto, Takashi; Oishi, Haruhito; Yamada, Tomio; Hatano, Renpei; Takakusa, Nobuo
PA Nippon Soda Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07D277-28
ICS A01N047-42; A01N047-44; C07D277-32; C07D277-34; C07D277-50
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04029983	A2	19920131	JP 1990-132537	19900524

OS MARPAT 117:48540
GI



I

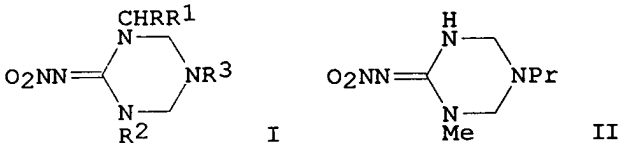
AB R1XNR2C(:NCN)R3 [R1 = (un)substituted 4- or 5-**thiazolyl**; X = (un)substituted alkylene, heteroatom; R2 = H, (un)substituted alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, YR4, NR5R6; Y = O, S(O)l, CO, CO2; l = 0-2; or XR2 forms a ring optionally contg. hetero atoms; R3 = SR7, NR8R9; R4-R8 = H, (un)substituted alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl; R9 = groups listed in R4-R8, ZR10, NR11R12; Z = groups listed in Y; R10 = groups listed in R4-R8; R11, R12 = groups listed in R4-R8, WR13; W = groups listed in Y; R13 = groups listed in R4-R8; or R8R9 forms a ring optionally contg. hetero atoms] are prepd. Thus, refluxing 3.0 g NCNC(SMe)2 and 2-chloro-5-**thiazolylmethylamine** in EtOH for 1 h with stirring and condensation of the resulting N-(2-chloro-5-**thiazolylmethyl**)-N'-cyano-S-methylisothiourea with MeNH2 in EtOH under reflux gave title compd. I. I at 125 ppm killed 100% cotton aphid on cucumber seedlings.
ST **thiazolylalkylcyanoguanidine** prepn insecticide; cyanoguanidine **thiazolyl** alkyl insecticide
IT Insecticides
(N-(**thiazolylalkyl**)-N'-cyanoguanidine or -S-methylisothiourea derivs. and analogs)
IT 131748-79-3P 141761-53-7P 141761-54-8P 141761-55-9P 141761-56-0P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)
IT 74-89-5, Methylamine, reactions 10191-60-3 120740-08-1
RL: RCT (Reactant)
(reaction of, in prepn. of insecticide)

L7 ANSWER 20 OF 33 CAPLUS COPYRIGHT 1999 ACS

AN 1992:426353 CAPLUS
DN **117:26353**
TI Process for the preparation of nitroguanidine derivatives
IN Maienfisch, Peter; Kristiansen, Odd; Gsell, Laurenz
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 52 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C07D213-61
ICS A01N043-40; C07D213-40; C07D277-32; A01N043-78
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
FAN.CNT 1

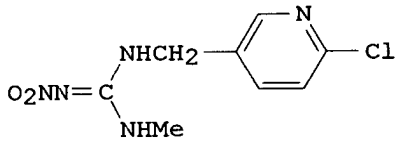
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 483062	A2	19920429	EP 1991-810795	19911015
	EP 483062	A3	19921028		
	EP 483062	B1	19960918		
	R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
	ES 2091899	T3	19961116	ES 1991-810795	19911015
	US 5245040	A	19930914	US 1991-777856	19911016
	IL 99801	A1	19960723	IL 1991-99801	19911018
	CA 2053954	AA	19920425	CA 1991-2053954	19911022
	JP 04330049	A2	19921118	JP 1991-303960	19911023
PRAI	CH 1990-3395		19901024		

OS CASREACT 117:26353; MARPAT 117:26353
GI



I

II



III

AB O2NN:C(NHR2)NHCHRR1 (R = heterocyclic; R1 = H, alkyl; R2 = H, alkyl, aralkyl, cycloalkyl) were prepd. by hydrolyzing triazines I [R3 = (un)substituted alkyl, cycloalkyl, Ph, CH2Ph]. Thus, 17.1 g O2NN:C(NH2)NHMe was treated with PrNH2 and aq. CH2OH to give 26.9 g triazine II. Treatment of 20.1 g II with 16.2 g 2-chloro-5-chloromethylpyridine to give 17.4 g I (R = 2-chloro-5-pyridyl, R1, R2 = H, R3 = Pr) which (4.25 g) was hydrolyzed with HCl-MeOH to give 2.51 g nitroguanidine III.

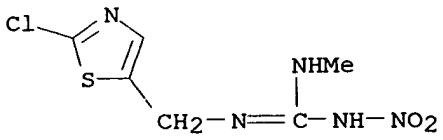
ST nitroguanidine pyridylmethyl **thiazolylmethyl**; pyridylmethylnitroguanidine; **thiazolylmethylnitroguanidine**

IT 141856-78-2P 141856-84-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and hydrolysis of)

IT 141856-46-4P 141856-49-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, with chloro(chloromethyl)pyridine)

IT 35089-65-7P 131748-47-5P 131748-50-0P 131748-53-3P 131748-56-6P
131748-59-9P 133258-61-4P 133258-65-8P 133258-66-9P 133258-70-5P
134323-25-4P 135018-04-1P 135018-10-9P 135018-11-0P 135018-14-3P
135018-15-4P 135018-16-5P 135018-17-6P 135018-18-7P 135018-19-8P
135018-20-1P 136516-16-0P 136516-17-1P 136516-18-2P 140920-89-4P

(CA INDEX NAME)



L5 ANSWER 3 OF 4 CAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER: 1993:59590 CAPLUS
DOCUMENT NUMBER: 118:59590
TITLE: Heterocyclic amidine derivatives [(heteroarylmethyl)nitroguanidine derivatives] and their use as pesticides (insecticides and acaricides)
INVENTOR(S): Kristiansen, Odd; Gsell, Laurenz; Maienfisch, Peter
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Eur. Pat. Appl., 63 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

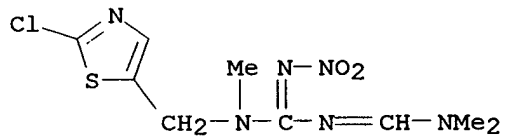
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 507736	A1	19921007	EP 1992-810225	19920326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT				
US 5223520	A	19930629	US 1992-858910	19920327
CA 2064920	AA	19921005	CA 1992-2064920	19920402
JP 05117237	A2	19930514	JP 1992-109199	19920402
AU 9214036	A1	19921008	AU 1992-14036	19920403
CN 1065456	A	19921021	CN 1992-102347	19920403
HU 60721	A2	19921028	HU 1992-1140	19920403
BR 9201197	A	19921201	BR 1992-1197	19920403
ZA 9202450	A	19930405	ZA 1992-2450	19920403
PRIORITY APPLN. INFO.:			CH 1991-1004	19910404

OTHER SOURCE(S): CASREACT 118:59590; MARPAT 118:59590

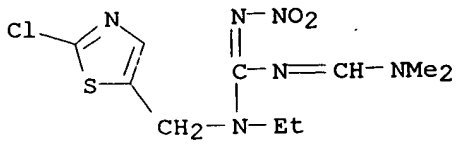
AB Some heterocyclic amidine derivs. and a **process** for their prepn. are claimed. The use of these compds. as pesticides (insecticides and acaricides) is claimed. Condensation of 1-amino-2-[[(2-chloro-5-pyridyl)methyl]methylamino]-2-nitroethene with DMF di-Et acetal gave the acyclic amidine I. I had activity against Nilaparvata lugens, Nephotettix cincticeps, Bemisia tabaci and Ctenocephalides felis (flea; systemic).

IT **145368-72-5P 145368-73-6P 145368-74-7P 145368-81-6P 145368-82-7P 145368-83-8P**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as pesticide)

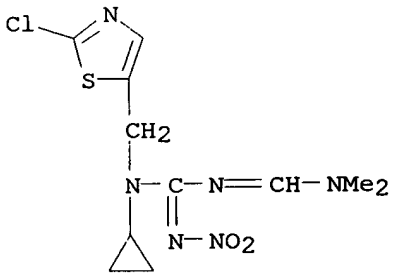
RN 145368-72-5 CAPLUS
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-[(dimethylamino)methylene]-N-methyl-N''-nitro- (9CI) (CA INDEX NAME)



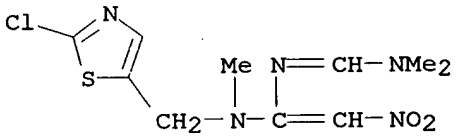
RN 145368-73-6 CAPLUS
CN Guanidine,
N-[(2-chloro-5-thiazolyl)methyl]-N'-[(dimethylamino)methylene]-
N-ethyl-N''-nitro- (9CI) (CA INDEX NAME)



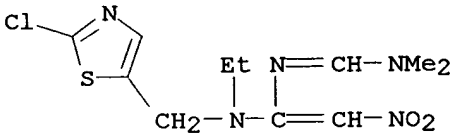
RN 145368-74-7 CAPLUS
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N-cyclopropyl-N'-
[(dimethylamino)methylene]-N''-nitro- (9CI) (CA INDEX NAME)



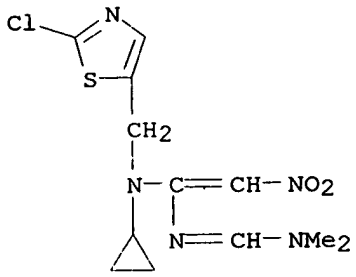
RN 145368-81-6 CAPLUS
CN Methanimidamide, N'-[1-[[(2-chloro-5-thiazolyl)methyl]methylamino]-2-
nitroethenyl]-N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 145368-82-7 CAPLUS
CN Methanimidamide, N'-[1-[[(2-chloro-5-thiazolyl)methyl]ethylamino]-2-
nitroethenyl]-N,N-dimethyl- (9CI) (CA INDEX NAME)



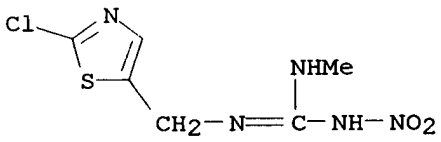
RN 145368-83-8 CAPLUS
CN Methanimidamide,
N'-[1-[[(2-chloro-5-thiazolyl)methyl]cyclopropylamino]-2-
nitroethenyl]-N,N-dimethyl- (9CI) (CA INDEX NAME)



L5 ANSWER 4 OF 4 CAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER: 1992:426353 CAPLUS
DOCUMENT NUMBER: 117:26353
TITLE: **Process** for the preparation of nitroguanidine derivatives
INVENTOR(S): Maienfisch, Peter; Kristiansen, Odd; Gsell, Laurenz
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Eur. Pat. Appl., 52 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

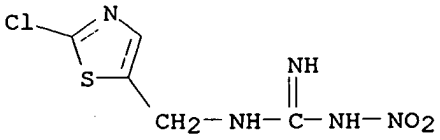
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 483062	A2	19920429	EP 1991-810795	19911015
EP 483062	A3	19921028		
EP 483062	B1	19960918		
R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
ES 2091899	T3	19961116	ES 1991-810795	19911015
US 5245040	A	19930914	US 1991-777856	19911016
IL 99801	A1	19960723	IL 1991-99801	19911018
CA 2053954	AA	19920425	CA 1991-2053954	19911022
JP 04330049	A2	19921118	JP 1991-303960	19911023
PRIORITY APPLN. INFO.:			CH 1990-3395	19901024

OTHER SOURCE(S): CASREACT 117:26353; MARPAT 117:26353
AB O2NN:C(NHR2)NHCHRR1 (R = heterocyclic; R1 = H, alkyl; R2 = H, alkyl, aralkyl, cycloalkyl) were prepd. by hydrolyzing triazines I [R3 = (un)substituted alkyl, cycloalkyl, Ph, CH2Ph]. Thus, 17.1 g O2NN:C(NH2)NHMe was treated with PrNH2 and aq. CH2OH to give 26.9 g triazine II. Treatment of 20.1 g II with 16.2 g 2-chloro-5-chloromethylpyridine to give 17.4 g I (R = 2-chloro-5-pyridyl, R1, R2 = H, R3 = Pr) which (4.25 g) was hydrolyzed with HCl-MeOH to give 2.51 g nitroguanidine III.
IT **131748-59-9P 135018-15-4P 135018-16-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 131748-59-9 CAPLUS
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro- (9CI) (CA INDEX NAME)

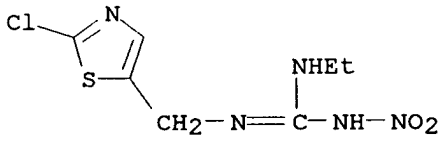


RN 135018-15-4 CAPLUS

CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-nitro- (9CI) (CA INDEX NAME)



RN 135018-16-5 CAPLUS
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-ethyl-N''-nitro- (9CI) (CA
INDEX NAME)



141856-47-5P 141856-48-6P 141856-50-0P 141856-51-1P 141856-52-2P
141856-53-3P 141856-54-4P 141856-55-5P 141856-56-6P 141856-57-7P
141856-58-8P 141856-59-9P 141856-60-2P 141856-61-3P 141856-62-4P
141856-63-5P 141856-64-6P 141856-65-7P 141856-66-8P 141856-67-9P
141856-68-0P 141856-69-1P 141856-70-4P 141856-71-5P 141856-72-6P
141856-73-7P 141856-74-8P 141856-75-9P 141856-76-0P 141856-77-1P
141856-79-3P 141856-80-6P 141856-81-7P 141856-82-8P 141856-83-9P
141856-85-1P 141856-86-2P 141856-87-3P 141856-88-4P 141856-89-5P
141856-90-8P 141856-91-9P 141856-92-0P 141856-93-1P 141856-94-2P
141856-95-3P 141856-96-4P 141856-97-5P 141856-98-6P 141856-99-7P
141857-00-3P 141857-01-4P 141857-02-5P 141857-03-6P 141857-04-7P
141857-05-8P 141857-06-9P 141857-07-0P 141857-08-1P 141857-09-2P
141857-10-5P 141857-11-6P 141857-12-7P 141857-13-8P 141857-14-9P
141857-15-0P 141857-16-1P 141857-17-2P 141857-18-3P 141857-19-4P
141857-20-7P 141857-21-8P 141857-22-9P 141857-23-0P 141857-24-1P
141857-25-2P 141857-26-3P 141857-27-4P 141857-28-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 556-88-7, Nitroguanidine 4245-76-5
RL: RCT (Reactant)
(reaction of, with amines and formaldehyde)

IT 62-53-3, Aniline, reactions 74-89-5, Methylamine, reactions 107-10-8, Propylamine, reactions
RL: RCT (Reactant)
(reaction of, with nitroguanidine and formaldehyde)

IT 50-00-0, Formaldehyde, reactions
RL: RCT (Reactant)
(reaction of, with nitroguanidines and amines)

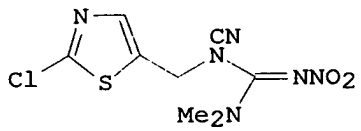
IT 70258-18-3, 2-Chloro-5-chloromethylpyridine
RL: RCT (Reactant)
(reaction of, with nitroiminotriazacyclohexanes)

=> d l7 21-33 all

L7 ANSWER 21 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1992:214489 CAPLUS
DN **116:214489**
TI Preparation of (heterocyclylmethyl)nitroguanidines as pesticides
IN Minamida, Isao; Kando, Yasuyuki; Ishizuka, Hitoshi; Okauchi, Tetsuo; Uneme, Hideki
PA Takeda Chemical Industries, Ltd., Japan
SO Eur. Pat. Appl., 68 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D277-32
ICS A01N047-44; C07D213-61
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 471372	A1	19920219	EP 1991-113705	19910815
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	IL 99161	A1	19961114	IL 1991-99161	19910812
	US 5256679	A	19931026	US 1991-745245	19910814
	CA 2049251	AA	19920218	CA 1991-2049251	19910815
	JP 05271207	A2	19931019	JP 1991-288208	19910815
	BR 9103540	A	19920512	BR 1991-3540	19910816
	HU 61735	A2	19930301	HU 1991-2731	19910816
	CN 1059719	A	19920325	CN 1991-105707	19910817
	CN 1028592	B	19950531		
	CN 1107836	A	19950906	CN 1994-107830	19940629

US 5696256 A 19971209 US 1995-439790 19950512
PRAI JP 1990-217356 19900817
JP 1990-219628 19900820
JP 1990-276628 19901015
JP 1991-36108 19910301
JP 1991-111987 19910516
JP 1990-98627 19900413
US 1991-682247 19910409
OS MARPAT 116:214489
GI



II

AB [R1CH2(R2)N](R3R4N)C:NNO2 [I; R1 = (substituted) heterocyclyl; R2 = group attached through a P or S atom, cyano, CO2R6, CONR7R8; R3 = H, (substituted) hydrocarbyl, group attached through a P or S atom, cyano, COR9, CO2R10, CONR11R12; R4 = H, alkyl; R6, R10 = (substituted) hydrocarbyl, heterocyclyl; R7, R8, R9, R11, R12 = R6; R7R8N, R11R12N = cyclic amino group] were prepd. Thus, 1-(2-chloro-5-**thiazolylmethyl**)-3,3-dimethyl-2-nitroguanidine was stirred 5 min with NaH in DMF; BrCN was added and the mixt. was stirred 1 h to give title compd. II. All I as 100 ppm sprays gave 100% kills of Nilaparvata lugens, Spodoptera litura, and Aphis gossypii.

ST nitroguanidine heterocyclylmethyl prepn pesticide; insecticide heterocyclylmethylnitroguanidine; **thiazolylmethylnitroguanidine** prepn insecticide

IT Insecticides
Pesticides
((heterocyclylmethyl)nitroguanidines)

IT 141205-34-7P 141205-35-8P 141205-36-9P 141205-37-0P 141205-38-1P
141205-39-2P 141205-40-5P 141205-41-6P 141205-42-7P 141205-43-8P
141205-44-9P 141205-45-0P 141205-46-1P 141205-47-2P 141205-48-3P
141205-49-4P 141205-50-7P 141205-51-8P 141205-52-9P 141205-53-0P
141205-54-1P 141205-55-2P 141205-56-3P 141205-57-4P 141205-58-5P
141205-59-6P 141205-60-9P 141205-61-0P 141205-62-1P 141205-63-2P
141205-64-3P 141205-65-4P 141205-66-5P 141205-67-6P 141205-68-7P
141205-69-8P 141205-70-1P 141205-71-2P 141205-72-3P 141205-73-4P
141205-74-5P 141205-75-6P 141205-76-7P 141205-77-8P 141205-78-9P
141205-79-0P 141205-80-3P 141205-81-4P 141205-82-5P 141205-83-6P
141205-84-7P 141227-31-8P 141227-32-9P 141227-33-0P 141227-34-1P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as pesticide)

IT 141205-33-6P 141205-85-8P 141205-86-9P 141205-87-0P 141205-88-1P
141205-89-2P 141205-90-5P 141205-91-6P 141227-35-2P 141227-36-3P
141227-37-4P 141227-38-5P 141227-39-6P 141227-40-9P 141227-41-0P
141227-42-1P 141227-43-2P 141227-44-3P 141227-45-4P 141227-46-5P
141227-47-6P 141227-48-7P 141227-49-8P 141227-50-1P 141227-51-2P
141227-52-3P 141227-53-4P 141227-54-5P 141227-55-6P 141227-56-7P
141227-57-8P 141227-58-9P 141227-59-0P 141227-60-3P 141227-61-4P
141227-62-5P 141227-63-6P 141227-64-7P 141227-65-8P 141227-66-9P
141227-67-0P 141227-68-1P 141227-69-2P 141227-70-5P 141227-71-6P
141227-72-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as pesticide intermediate)

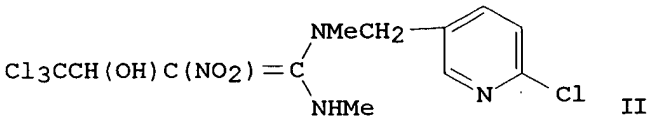
IT 74-89-5, Methylamine, reactions 79-22-1, Methyl chlorocarbonate
97-72-3, Isobutyric anhydride 98-88-4, Benzoyl chloride 103-80-0,

Phenylacetyl chloride 108-12-3 108-23-6 109-61-5 110-91-8, Morpholine, reactions 123-62-6 124-40-3, Dimethylamine, reactions 124-63-0, Methanesulfonyl chloride 141-75-3, Butanoyl chloride 501-53-1, Benzyl chloroformate 506-68-3, Cyanogen bromide 541-41-3 543-27-1 592-34-7 594-42-3, Trichloromethanesulfenyl chloride 638-29-9, Pentanoyl chloride 1005-56-7, Phenyl chlorothionoformate 1710-98-1 1885-14-9, Phenyl chloroformate 2986-25-6, S-Methyl-N-nitroisothiourea 5271-67-0, 2-Thiophenecarbonyl chloride 5856-79-1 10147-36-1, Propanesulfonyl chloride 24424-99-5 38870-89-2
50893-53-3, 1-Chloroethyl chloroformate 59660-22-9 120740-08-1 131748-65-7 138149-97-0
RL: RCT (Reactant)
(reaction of, in prepn. of pesticide)

L7 ANSWER 22 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1992:106279 CAPLUS
DN **116:106279**
TI Preparation of 1-amino-1-(heterocyclylmethylamino)-2-nitro-3-hydroxy-4-halo(alkyl)-1-butenes as pesticides
IN Maienfisch, Peter; Gsell, Laurenz; Kristiansen, Odd
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 79 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C07D213-61
ICS A01N043-40; C07D213-38; C07D277-32; C07D213-89; A01N043-78
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5, 27
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 453398	A2	19911023	EP 1991-810225	19910327
	EP 453398	A3	19920520		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
	CA 2039779	AA	19911007	CA 1991-2039779	19910404
	AU 9174091	A1	19911024	AU 1991-74091	19910404
	AU 640999	B2	19930909		
	CN 1055356	A	19911016	CN 1991-102178	19910405
	HU 56810	A2	19911028	HU 1991-1125	19910405
	BR 9101372	A	19911126	BR 1991-1372	19910405
	ZA 9102532	A	19911224	ZA 1991-2532	19910405
	JP 04234848	A2	19920824	JP 1991-100470	19910405
PRAI	CH 1990-1169	19900406			
	CH 1990-3481	19901102			

OS MARPAT 116:106279
GI



II

AB XYZCCH(OH)(C(NO2):C(NR3R4)NR1CHR2A [I; R1, R3 = H, (cyclo)alkyl; R2 = H, alkyl; R4 = H, (cyclo)alkyl, CH2B; R3R4 = (CH2)4, (CH2)5; X = halo, haloalkyl; Y, Z = halo; A = (substituted) (arom.) (bi)heterocyclyl; B = (substituted) Ph, pyridyl, **thiazolyl**], were prepd. Thus, 1-methylamino-1-[N-(6-chloropyrid-3-ylmethyl)-N-methyl]amino-2-nitroethylene was stirred with Cl3CCHO in CH2Cl2 to give 94% title compds.
II. Numerous I at 400 ppm on rice plants gave > 80% control of

Nephotettix cincticeps.

ST heterocyclylnitroenamine prepn pesticide; insecticide heterocyclylnitroenamine; acaricide heterocyclylnitroenamine

IT Acaricides
Insecticides
(heterocyclenitroenamines)

IT 75-87-6, Chloral 375-02-0 811-96-1
RL: RCT (Reactant)
(condensation of, with (methylamino)nitroethylene deriv.)

IT 120738-59-2
RL: RCT (Reactant)
(condensation of, with chloral, in prepn. of insecticide and acaricide)

IT 133077-67-5P 137996-47-5P 137996-48-6P 137996-49-7P 137996-50-0P
137996-51-1P 137996-52-2P 137996-53-3P 137996-54-4P 137996-55-5P
137996-56-6P 137996-57-7P 137996-58-8P 137996-59-9P 137996-60-2P
137996-61-3P 137996-62-4P 137996-63-5P 137996-64-6P 137996-65-7P
137996-66-8P 137996-67-9P 137996-68-0P 137996-69-1P 137996-70-4P
137996-71-5P 137996-72-6P 137996-73-7P 137996-74-8P 137996-75-9P
137996-76-0P 137996-77-1P 137996-78-2P 137996-79-3P 137996-80-6P
137996-81-7P 137996-82-8P 137996-83-9P 137996-84-0P 138023-64-0P
138626-97-8P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide and acaricide)

L7 ANSWER 23 OF 33 CAPLUS COPYRIGHT 1999 ACS

AN 1992:21040 CAPLUS

DN **116:21040**

TI Preparation of N-**thiazolylmethyl**-N"-nitroguanidines and analogs as acaricides and insecticides

IN Yasuyuki, Kando; Hideki, Uneme; Isao, Minamida

PA Takeda Chemical Industries, Ltd., Japan

SO Eur. Pat. Appl., 37 pp.
CODEN: EPXXDW

DT Patent

LA English

IC ICM C07D207-404
ICS C07D209-48; C07D211-88; C07D223-10; C07D213-40; C07D213-61; C07D277-28; C07D277-32; C07C335-40

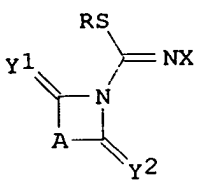
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5

FAN.CNT 2

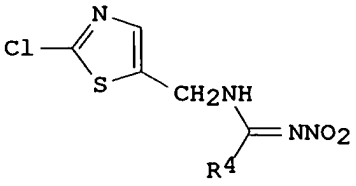
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 452782	A1	19911023	EP 1991-105637	19910410
	EP 452782	B1	19970115		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 05009173	A2	19930119	JP 1991-144295	19910402
	AT 147730	E	19970215	AT 1991-105637	19910410
	ES 2096598	T3	19970316	ES 1991-105637	19910410
	CA 2040385	AA	19911014	CA 1991-2040385	19910412
	HU 58049	A2	19920128	HU 1991-1227	19910412
	IL 97839	A1	19970218	IL 1991-97839	19910412
	US 5696256	A	19971209	US 1995-439790	19950512
PRAI	JP 1990-98627	19900413			
	JP 1990-217356	19900817			
	US 1991-682247	19910409			

OS MARPAT 116:21040

GI



I



II

AB R1R2NC(:NNO2)NR3(CH2)nB [B = (un)substituted (hetero)cyclic group; R1, R3 = H, acyl, (un)substituted hydrocarbyl; R2 = H, (un)substituted hydrocarbyl; NR1R2 = cyclic amino group; n = 0, 1] were prepd. as insecticides and acaricides (no data) together with their intermediates I [R = acyl, (un)substituted hydrocarbyl; A = (un)substituted hydrocarbyldiyl; X = electron-withdrawing group; Y1, Y2 = O, S]. Thus, MeSC(:NNO2)NH2 was cyclocondensed with phthaloyl chloride to give I (A = 1,2-phenylenediyl, R = Me, X = NO2, Y1 = Y2 = O) which was condensed with 2-chloro-5-(aminomethyl)**thiazole** to give isothiourea II (R4 = SMe). The latter was condensed with MeNH2 to give title compd. II (R4 = MeNH).

ST nitroguanidine **thiazolylmethyl** prepn acaricide insecticide

IT Acaricides
Insecticides
(N-**thiazolylmethyl**-N''-nitroguanidines and analogs)

IT 59660-22-9P 132219-48-8P 137589-64-1P 138149-96-9P 138149-97-0P 138149-98-1P 138149-99-2P 138150-00-2P 138150-01-3P 138150-02-4P 138150-03-5P 138150-04-6P 138150-05-7P 138169-89-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of insecticides and acaricides)

IT 35089-65-7P 131748-47-5P 131748-48-6P 131748-49-7P 131748-50-0P 131748-51-1P 131748-53-3P 131748-54-4P 131748-55-5P 131748-56-6P 131748-57-7P 131748-58-8P 131748-59-9P 131748-60-2P 131748-61-3P 131748-65-7P 131748-66-8P 131748-69-1P 131748-70-4P 131748-71-5P 131748-72-6P 131748-73-7P 131748-74-8P 131748-75-9P 131748-76-0P 131748-85-1P 131748-86-2P 131768-12-2P 131768-13-3P 135018-15-4P 137589-63-0P 138149-87-8P 138149-88-9P 138149-89-0P 138149-90-3P 138149-91-4P 138149-92-5P 138149-93-6P 138149-94-7P 138149-95-8P 138150-06-8P 138150-07-9P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide and acaricide)

IT 88-95-9, Phthaloyl chloride 100-46-9, Benzylamine, reactions 111-50-2, Adipic acid dichloride 543-20-4, Succinic acid chloride 2873-74-7, Pentanedioyl dichloride 2986-25-6, S-Methyl-N-nitroisothiourea 21062-20-4, Diglycolic acid dichloride 60901-05-5 97004-04-1, (6-Chloro-3-pyridyl)methylamine 120739-77-7 120740-08-1, 2-Chloro-5-(aminomethyl)**thiazole**
RL: RCT (Reactant)
(reaction of, in prepn. of insecticides and acaricides)

L7 ANSWER 24 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1991:680003 CAPLUS
DN **115:280003**
TI Preparation of (heteroarylmethyl)nitroguanidines as insecticides
IN Nanjo, Katsumi; Takasuka, Kiyoshi; Segami, Shigenori; Kariya, Akinori
PA Agro-Kanesho Co., Ltd., Japan
SO Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D213-61
ICS C07D277-32; A01N047-44

CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 425978	A2	19910508	EP 1990-120294	19901023
	EP 425978	A3	19911106		
	R: CH, DE, FR, GB, IT, LI				
	JP 03200768	A2	19910902	JP 1989-328888	19891219
	AU 9063964	A1	19910530	AU 1990-63964	19901010
	US 5166164	A	19921124	US 1990-596039	19901011
	CN 1051728	A	19910529	CN 1990-109217	19901023
PRAI	JP 1989-276633	19891024			
	JP 1989-328888	19891219			

OS MARPAT 115:280003
AB XCH2NRC(:NNO2)NR1R2 (I; R1-R2 = H, Me; X = 6-chloro-3-pyridinyl, 2-chloro-5-**thiazolyl**) were prepd. by reaction of MeSC(:NNO2)NR1R2 with XCH2NHR (R = H, Me; X as above), optionally followed by methylation of the resulting nitroguanidine. Thus, a mixt. of 1.50 g 2-chloro-N-methyl-5-**thiazolemethanamine** and 1.13 g MeSC(:NNO2)NH2 in 6 mL EtOH was refluxed 6 h to give 1.00 g title compd. (I; R = Me, R1 = R2 = H, X = 2-chloro-5-**thiazolyl**) which at 500 ppm on rice seedlings gave 100% kill of second instar larvae of green rice leafhopper which had acquired resistance to chems., vs. 70% kill at the same concn. for (MeO)2P(:S)OC6H3(Me)NO2-3,4 (sumithion) as a control.
ST chlorothiazolylnitroguanidine prepn insecticide; **thiazolylmethanamine** substitution methylnitroisothiourea
IT Insecticides
(heteroarylmethylnitroguanidines)
IT 120739-62-0 120740-06-9 120740-08-1
RL: RCT (Reactant)
(condensation reaction of, with nitroisothiourea deriv., in prepn. of insecticide)
IT 2986-25-6, S-Methyl-N-nitroisothiourea 59660-22-9
RL: RCT (Reactant)
(condensation reaction of, with pyridine- and **thiazolemethanamine** derivs., in prepn. of insecticides)
IT 131748-47-5P 131748-49-7P 131748-55-5P 131748-56-6P 131748-59-9P 131748-70-4P 131748-77-1P 131768-12-2P 135018-15-4P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)

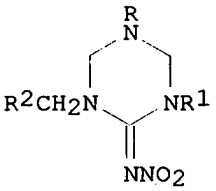
L7 ANSWER 25 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1991:583374 CAPLUS
DN **115:183374**
TI Preparation of hexahydrotriazine compounds as insecticides
IN Wu, Frank; Kariya, Akinori; Katsuyama, Noriyoshi; Tsuji, Atsushi; Takasuka, Kiyoshi; Segami, Shigenori; Nanjo, Katsumi; Sato, Junko
PA Agro-Kanesho Co., Ltd., Japan
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D251-04
ICS A01N043-64
CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 428941	A1	19910529	EP 1990-121383	19901108

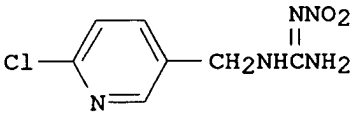
	EP 428941	B1	19950503		
	R: CH, DE, FR, GB, IT, LI				
	JP 03218370	A2	19910925	JP 1990-24199	19900202
	JP 06000776	B4	19940105		
	AU 9065623	A1	19910516	AU 1990-65623	19901031
	AU 628229	B2	19920910		
	CN 1060656	A	19920429	CN 1990-109039	19901110
	CN 1026648	B	19941123		
	CN 1098719	A	19950215	CN 1994-103331	19940325
PRAI	JP 1989-292675	19891110			
	JP 1990-24199	19900202			

OS MARPAT 115:183374

GI



I



II

AB Hexahydrotriazine derivs. [I; R = alkyl, alkenyl; R1 = H, alkyl, alkenyl, alkynyl, (6-chloro-3-pyridyl)methyl; R2 = 6-chloro-3-pyridyl, 2-chlorothiazol-5-yl] are prepd. A soln. of Et3N in THF was added to a suspension of 0.6 g guanidine deriv. II and 0.4 g (ClCH2)2NMe in THF with stirring under cooling to give 0.78 g I (R = Me, R1 = H, R2 = 6-chloro-3-pyridyl), which killed 100% green rice leafhopper larvae at 500 ppm. Also prepd. and tested were 11 addnl. I.

ST triazine prepn insecticide

IT Insecticides
(hexahydrotriazine compds.)

IT 131748-56-6
RL: RCT (Reactant)
(cyclocondensation of, with amine derivs., in prepn. of insecticide)

IT 75-04-7, Ethylamine, reactions 34645-08-4
RL: RCT (Reactant)
(cyclocondensation of, with nitroguanidine deriv., in prepn. of insecticide)

IT 133258-61-4P 133258-66-9P 136516-17-1P 136516-18-2P 136516-19-3P 136516-20-6P 136516-21-7P 136516-22-8P 136516-23-9P 136516-24-0P 136516-25-1P 136544-01-9P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)

IT 136516-16-0
RL: RCT (Reactant)
(reaction of, with chloropyridylmethyl chloride, in prepn. of insecticide)

IT 70258-18-3 105827-91-6, 2-Chloro-5-**thiazolylmethyl** chloride
RL: RCT (Reactant)
(reaction of, with triazine deriv., in prepn. of insecticide)

L7 ANSWER 26 OF 33 CAPLUS COPYRIGHT 1999 ACS

AN 1991:471585 CAPLUS

DN **115:71585**

TI Guanidine derivatives as insecticides

IN Kristiansen, Odd; Maienfisch, Peter; Gsell, Laurenz

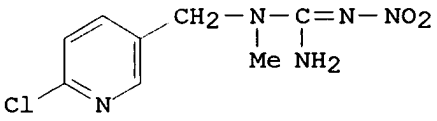
PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 48 pp.

CODEN: EPXXDW
DT Patent
LA German
IC ICM C07D213-61
ICS C07D213-40; A01N043-40; C07D277-32; C07D401-12
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5, 27
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 418199	A2	19910320	EP 1990-810668	19900904
	EP 418199	A3	19910612		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
	CA 2025072	AA	19910314	CA 1990-2025072	19900911
	DD 297639	A5	19920116	DD 1990-343952	19900911
	AU 9062456	A1	19910321	AU 1990-62456	19900912
	CN 1050186	A	19910327	CN 1990-107654	19900912
	HU 54872	A2	19910429	HU 1990-5882	19900912
	ZA 9007265	A	19910626	ZA 1990-7265	19900912
	BR 9004550	A	19910910	BR 1990-4550	19900912
	JP 03109374	A2	19910509	JP 1990-243700	19900913
PRAI	CH 1989-3335	19890913			
	CH 1990-1078	19900402			

OS MARPAT 115:71585
GI



I

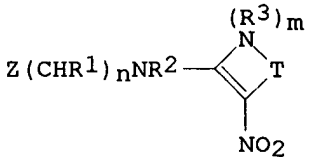
AB ACHR2NR1C(:NNO2)NR3R4 [R1, R3 = H, C1-4 alkyl, C3-6 cycloalkyl; R2 = H, C1-4 alkyl; R4 = H, C1-4 alkyl, C3-6 cycloalkyl, CHR5B; R3R4 = (CH2)4, (CH2)5; R5 = H, C1-4 alkyl; A = (un)substituted, arom. or (un)satd., (bi)cyclic (hetero)ring; B = (un)substituted Ph, (un)substituted 3-pyridyl, (un)substituted 5-**thiazolyl**] and their salts (with proviso), were prepd., e.g., by reaction of amines HNR1CHR2A with nitroisothioureas MeSC(:NNO2)NR3R4. Thus, a mixt. of N-methyl-(2-chloropyrid-5-yl)methylamine, S-methyl-N-nitroisothiourea, and KHSO4 in EtOH was refluxed 4.5 h to give title compd. (I) which at 400 ppm on rice plants gave >80% redn. of the population of Nilaparvata lugens.
ST nitroguanidine prepn insecticide
IT Insecticides
(nitroguanidines)
IT 104-83-6, 4-Chlorobenzyl chloride
RL: RCT (Reactant)
(benzylation by, of nitroguanidine deriv., in prepn. of insecticide)
IT 35089-65-7P 131748-47-5P 131748-48-6P 131748-49-7P 131748-50-0P
131748-53-3P 131748-54-4P 131748-56-6P 131748-57-7P 131748-59-9P
131748-65-7P 131748-70-4P 131768-12-2P 133001-33-9P 135018-02-9P
135018-03-0P 135018-04-1P 135018-05-2P 135018-06-3P 135018-07-4P
135018-08-5P 135018-09-6P 135018-10-9P 135018-11-0P 135018-12-1P
135018-13-2P 135018-14-3P 135018-15-4P 135018-16-5P 135018-17-6P
135018-18-7P 135018-19-8P 135018-20-1P 135051-39-7P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)
IT 41288-91-9
RL: RCT (Reactant)
(reaction of, with isothiourea deriv., in prepn. of insecticide)
IT 120739-84-6

RL: RCT (Reactant)
(reaction of, with nitroguanidine, in prepn. of insecticide)
IT 556-88-7, Nitroguanidine 2986-25-6, S-Methyl-N-nitroisothiourea
RL: RCT (Reactant)
(reaction of, with pyridylmethylamine deriv., in prepn. of insecticide)

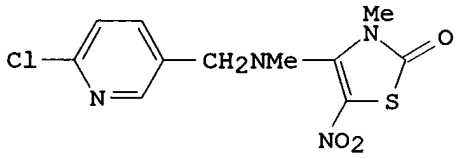
L7 ANSWER 27 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1991:185533 CAPLUS
DN **114:185533**
TI Preparation of nitro-substituted heterocylcic compounds as insecticides
IN Shiokawa, Kozo; Tsuboi, Shinichi; Moriya, Koichi; Hattori, Yumi; Honda, Ikuro; Shibuya, Katsuhiko
PA Nihon Tokushu Noyaku Seizo K. K., Japan
SO Eur. Pat. Appl., 54 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D213-74
ICS A01N043-30; A01N043-54; A01N043-78; C07D401-12; C07D239-12; C07D417-12
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 398084	A2	19901122	EP 1990-108414	19900504
EP 398084	A3	19920429		
R: BE, CH, DE, FR, GB, IT, LI, NL				
JP 03197460	A2	19910828	JP 1990-25190	19900206
US 5081132	A	19920114	US 1990-518684	19900503
EP 606105	A1	19940713	EP 1994-101886	19900504
EP 606105	B1	19981125		
R: BE, CH, DE, FR, GB, IT, LI, NL				
US 5219869	A	19930615	US 1992-943950	19920911
US 5314897	A	19940524	US 1993-90566	19930712
PRAI JP 1989-121366	19890517			
US 1990-518684	19900503			
EP 1990-108414	19900504			
US 1991-760412	19910916			
US 1992-898064	19920612			

OS MARPAT 114:185533
GI



I



II

AB Title compds. I [R1 = H, cyano, C1-4 alkyl; R2 = H, (substituted) C1-4 alkyl, halo, C1-4 alkyl, halo, C1-4 alkoxy, C3-4 alkenyl, C3-4 alkynyl, (substituted) Ph or PhCH2, methylated (substituted) heterocyclyl; T = (substituted) 2- or 3-membered divalent or trivalent chain comprising hetero and(or) C atoms; Z = (substituted) Ph or heterocyclyl; m, n = 0] are prepd. A mixt. of 3-methyl-4-(methylthio)-5-nitro-2-**thiazolone** (prepn. given), N-(2-chloro-5-(pyridylmethyl)-N-methylamine and EtOH was refluxed for 5 h and cooled to room temp. to give

the title heterocycle II. II at 200 ppm gave 100% mortality of Nephotettix cincticeps on rice plant.

ST pyridylmethylaminoheterocycle prepn insecticide; **thiazolone** pyridylmethylamino insecticide; heterocycle nitro substituted insecticide; pyrimidine pyridylmethylamino insecticide

IT Insecticides
(nitrosubstituted heterocyclic compds.)

IT 129950-36-3P 133287-11-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of nitro-substituted heterocyclic insecticides)

IT 129438-21-7P 129438-30-8P 129438-31-9P 129438-33-1P 129438-35-3P
129438-39-7P 129438-58-0P 129452-08-0P 129950-09-0P 129950-10-3P
129950-15-8P 133286-90-5P 133286-91-6P 133286-92-7P 133286-93-8P
133286-94-9P 133286-95-0P 133286-96-1P 133286-97-2P 133286-98-3P
133286-99-4P 133287-00-0P 133287-01-1P 133287-02-2P 133287-03-3P
133287-04-4P 133287-05-5P 133287-06-6P 133287-07-7P 133287-08-8P
133287-09-9P 133287-10-2P 133304-00-4P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)

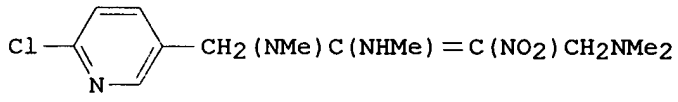
IT 50-00-0, Formaldehyde, reactions 74-89-5, Methylamine, reactions 2757-23-5 5470-18-8, 2-Chloro-3-nitropyridine 6542-88-7, Aminoacetal 13623-94-4, 2,2-Bis(methylthio)-1-nitroethylene 61832-41-5 120738-58-1 120739-62-0
RL: RCT (Reactant)
(reaction of, in prepn. of nitro-substituted heterocyclic insecticides)

L7 ANSWER 28 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1991:164015 CAPLUS
DN **114:164015**
TI Preparations of (pyridylalkyl)diaminoethylenes as insecticides
IN Uneme, Hideki; Minamida, Isao; Okauchi, Tetsuo
PA Takeda Chemical Industries, Ltd., Japan
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D213-61
ICS C07D277-32; A01N043-40; A01N043-78; C07D213-643; C07D213-74; C07D213-70; C07D213-38
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 5

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 392560	A2	19901017	EP 1990-107120	19900412
	EP 392560	A3	19920108		
	EP 392560	B1	19951227		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	IL 94027	A1	19950315	IL 1990-94027	19900406
	BR 9001734	A	19910604	BR 1990-1734	19900411
	JP 03169861	A2	19910723	JP 1990-97363	19900411
	IN 170550	A	19920411	IN 1990-MA269	19900411
	CA 2014490	AA	19901014	CA 1990-2014490	19900412
	US 5438065	A	19950801	US 1990-507776	19900412
	AT 132139	E	19960115	AT 1990-107120	19900412
	ES 2081314	T3	19960301	ES 1990-107120	19900412
	HU 53780	A2	19901228	HU 1990-2438	19900413
	HU 207202	B	19930329		
	CN 1046896	A	19901114	CN 1990-102111	19900414

CN 1036112 B 19971015
PRAI JP 1989-95580 19890414
JP 1989-201980 19890802
OS MARPAT 114:164015
GI



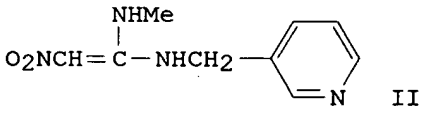
I

AB Title compds. R1(CH2)nNR2C(NR3R4):CXCHR5Y (R1 = (substituted) heterocyclyl; R2, R3, R4 = H, (substituted) hydrocarbyl, R3R4N = heterocyclyl; R5 = H, (substituted) hydrocarbyl, (substituted) heterocyclyl; X = electron attractant; Y = R6O, R6 = H, (substituted) hydrocarbyl, -heterocyclyl, (substituted) amino), etc.; n = 0, 1) or a salt thereof, are prepd.
1-[N-(6-Chloro-3-pyridylmethyl)-N-methylamino]-1-(methylamino)-2-nitroethylene, aq. CH2O, aq. Me2NH and MeCN were stirred at room temp. for 8.5 h to give the pyridine deriv. I. I at 500 and 100 ppm resulted in 100% mortality against Nilaparvata lugens and Aphis gossypii, resp.
ST pyridylmethyldiaminoethylene substituted prepn insecticide; **thiazolylmethyldiaminoethylene** substituted prepn insecticide; insecticide heterocyclyldiaminoethylene substituted
IT Insecticides
(substituted heterocyclyldiaminoethylene)
IT 133077-59-5P 133077-60-8P 133077-61-9P 133077-62-0P 133077-63-1P
133077-64-2P 133077-65-3P 133077-66-4P 133077-67-5P 133077-68-6P
133077-69-7P 133077-70-0P 133077-71-1P 133077-72-2P 133077-73-3P
133077-74-4P 133077-75-5P 133077-76-6P 133077-77-7P 133077-78-8P
133077-79-9P 133077-80-2P 133077-81-3P 133077-82-4P 133077-83-5P
133077-84-6P 133077-85-7P 133077-86-8P 133077-87-9P 133077-88-0P
133077-89-1P 133077-90-4P 133077-91-5P 133105-15-4P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)
IT 50-00-0, Formaldehyde, reactions 106-54-7, p-Chlorothiophenol
302-17-0, Chloral hydrate 120738-59-2
RL: RCT (Reactant)
(reaction of, in prepn. of insecticides)

L7 ANSWER 29 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1991:61936 CAPLUS
DN **114:61936**
TI Preparation of pyridine derivatives and other heterocycles as insecticides
IN Aoki, Isao; Tabuchi, Takanori; Minamida, Isao
PA Takeda Chemical Industries, Ltd., Japan
SO Eur. Pat. Appl., 34 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D213-36
ICS C07D213-61; C07D213-64; C07D215-12; C07D241-12; C07D277-28; C07D277-32; C07C205-08
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI EP 381130 A2 19900808 EP 1990-101778 19900130
EP 381130 A3 19901031
R: CH, DE, FR, GB, IT, LI
IL 93159 A1 19961114 IL 1990-93159 19900124
HU 52751 A2 19900828 HU 1990-609 19900131
HU 209439 B 19940628
JP 02275841 A2 19901109 JP 1990-22503 19900131
US 5364989 A 19941115 US 1992-908725 19920706
PRAI JP 1989-23356 19890131
US 1990-473173 19900131
US 1990-527898 19900524
OS MARPAT 114:61936
GI



II

AB The title compds. O2NCH:C(NR2R3)NR1CnH2nA [R1 = H, alkyl, haloalkyl, aralkyl, etc.; R2 = H, alkyl, aralkyl; R3 = H, alkyl, haloalkyl, hydroxyalkyl, etc.; A = (substituted) 3- or 4-pyridyl, pyrazinyl, 2-, 4-, or 5-**thiazolyl**, etc.; n = 0-2] were prepd. by reaction of X1X2X3CCH2NO2 (I; X1, X2 = F, Cl, Br, iodo; X3 = Cl, Br) with R1NHCnH2nA. I were prepd. by reactive of X1X2C:CH2 with HNO3 or its salts and HCl or HBr or its salt. N-(6-Chloro-3-pyridyl)methyl-N-ethylamine was added to a mixt. of Cl3CCH2NO2 and K2CO3 in MeCN. After addn. of K2CO3 and MeNH2 in MeOH, the reaction mixt. was stirred for 1 h at 18-20.degree. to give 62.7% 1-[N-6-chloro-3-pyridyl)methyl-N-ethyl]amino-1-methylamino-2-nitroethylene. Pyridine deriv. II at 500 ppm gave 100% kill of Nilaparvata lugens larvae.

ST pyridine substituted prepn insecticide; heterocyclic compd prepn insecticide; insecticide substituted pyridine heterocyclic compd

IT Insecticides
(pyridine derivs. and other heterocycles)

IT 630-20-6P, 1,1,1,2-Tetrachloroethane
RL: FORM (Formation, nonpreparative); SPN (Synthetic preparation); PREP (Preparation)
(formation of, in prepn. of insecticide)

IT 7697-37-2, Nitric acid, reactions
RL: RCT (Reactant)
(nitration by, of dichloroethylene)

IT 75-35-4, 1,1-Dichloroethylene, reactions
RL: RCT (Reactant)
(nitration of)

IT 6061-04-7P, 1,1-Dichloro-2-nitroethylene
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of insecticide)

IT 90787-25-0P 120738-35-4P 120738-36-5P 120738-37-6P 120738-38-7P
120738-39-8P 120738-40-1P 120738-41-2P 120738-42-3P 120738-43-4P
120738-44-5P 120738-45-6P 120738-46-7P 120738-47-8P 120738-48-9P
120738-49-0P 120738-50-3P 120738-51-4P 120738-52-5P 120738-53-6P
120738-54-7P 120738-55-8P 120738-56-9P 120738-58-1P 120738-59-2P
120738-61-6P 120738-62-7P 120738-63-8P 120738-64-9P 120738-65-0P
120738-66-1P 120738-67-2P 120738-68-3P 120738-69-4P 120738-70-7P
120738-71-8P 120738-72-9P 120738-73-0P 120738-74-1P 120738-75-2P
120738-76-3P 120738-77-4P 120738-78-5P 120738-79-6P 120738-80-9P
120738-81-0P 120738-82-1P 120738-85-4P 120738-86-5P 120738-87-6P
120738-88-7P 120738-89-8P 120738-90-1P 120738-91-2P 120738-92-3P
120738-93-4P 120738-96-7P 120738-97-8P 120738-98-9P 120738-99-0P
120739-00-6P 120739-03-9P 120739-04-0P 120739-05-1P 120739-06-2P

120739-07-3P 120739-08-4P 120739-09-5P 120739-10-8P 120739-11-9P
120739-13-1P 120739-14-2P 120739-15-3P 120739-16-4P 120739-17-5P
120739-18-6P 120739-19-7P 120739-20-0P 120739-21-1P 120739-22-2P
120739-23-3P 120739-24-4P 120739-25-5P 120739-26-6P 120739-27-7P
120739-28-8P 120739-29-9P 120739-30-2P 120739-31-3P 120739-32-4P
120739-33-5P 120739-34-6P 120739-35-7P 120739-36-8P 120739-46-0P
120739-55-1P 120739-57-3P 120739-59-5P 120770-85-6P 120770-86-7P
120770-87-8P 131427-96-8P 131427-97-9P 131427-98-0P 131427-99-1P
131428-00-7P 131428-01-8P 131428-02-9P 131428-03-0P 131428-04-1P
131428-05-2P 131428-06-3P 131428-07-4P 131428-08-5P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)

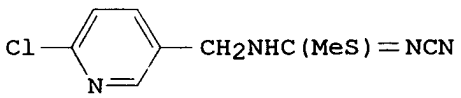
IT 64326-81-4P, 1,1,1-Trichloro-2-nitroethane 97987-61-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as insecticide intermediate)

IT 97004-04-1 120739-77-7 120740-08-1
RL: RCT (Reactant)
(reaction of, in prepn. of insecticide)

L7 ANSWER 30 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1990:532013 CAPLUS
DN **113:132013**
TI Preparation of (pyridylmethyl)-containing cyano compounds and analogs as insecticides
IN Shiokawa, Kozo; Tsuboi, Shinichi; Moriya, Koichi; Honda, Ikuro; Hattori, Yumi; Shibuya, Katsuhiko
PA Nihon Tokushu Noyaku Seizo K. K., Japan
SO Eur. Pat. Appl., 56 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D213-61
ICS A01N047-44; C07D213-75; C07D239-26; C07D277-32; A01N047-42
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 5, 28
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 364844	A1	19900425	EP 1989-118689	19891007
	EP 364844	B1	19940316		
	R: BE, CH, DE, FR, GB, IT, LI, NL				
	JP 02209868	A2	19900821	JP 1989-57813	19890313
	JP 2884412	B2	19990419		
	US 5066808	A	19911119	US 1990-584398	19900914
	US 5384324	A	19950124	US 1993-55402	19930430
PRAI	JP 1988-264020		19881021		
	JP 1989-57813		19890313		
	US 1989-419428		19891010		
	US 1990-584398		19900914		
	US 1991-678382		19910401		

OS MARPAT 113:132013
GI



I

AB Title compds. Z(CHR1)mNR2CR3:NCN [Z = halopyridyl and other 5- and 6-membered heterocyclyl; R1 = H, cyano, C1-4 alkyl; R2 = H, C1-6 alkyl,

(un)substituted C3-4 alkenyl, C3-4 alkynyl, (un)substituted C3-8 cycloalkyl, (substituted) Ph, (substituted) PhCH2, HO, C1-4 alkoxy, ZCH2; R3 = R4O, R4S, R5R6N; R4 = C1-6 alkyl, C3-4 alkenyl, C3-4 alkynyl, C3-8 cycloalkyl, etc.; R5, R6 = H, (un)substituted C1-9 alkyl, (alkyl)amino, halo, OH, SH, alkoxy, etc., or R5R6N = 3-7-membered heterocyclyl; m = 0, 1] are prepd. 5-(Aminomethyl)-2-chloropyridine and (MeS)2C:NCN reacted to give the pyridine compd. I. I at 50 ppm showed 100% mortality against Nephotettix cincticeps and Nilaparvata lugens.

ST pyridylmethyl cyano compd prepn insecticide; pyrimidinylmethyl cyano compd prepn insecticide; **thiazolylmethyl** cyano compd prepn insecticide; heterocyclylmethyl cyano compd prepn insecticide

IT Insecticides
(heterocyclylmethyl cyano compds.)

IT 129478-21-3P 129478-22-4P 129478-23-5P 129478-24-6P 129478-25-7P 129478-26-8P 129478-27-9P 129478-28-0P 129478-29-1P 129478-30-4P 129478-31-5P 129478-32-6P 129478-33-7P 129478-34-8P 129478-35-9P 129478-36-0P 129478-37-1P 129478-38-2P 129478-39-3P 129478-40-6P 129478-41-7P 129478-42-8P 129478-43-9P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as insecticide)

IT 5848-24-8 10191-60-3 15760-26-6 97004-04-1, 5-(Aminomethyl)-2-chloropyridine 105827-91-6, 2-Chloro-5-(chloromethyl)**thiazole**
RL: RCT (Reactant)
(reaction of, in prepn. of insecticides)

L7 ANSWER 31 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1990:158237 CAPLUS
DN **112:158237**
TI Preparation and formulation of **thiazole**-5-carboxylic acid amides as herbicide antidotes
IN Nyffeler, Andreas; Toepfl, Werner
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 29 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C07D277-56
ICS A01N025-32
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 335831	A1	19891004	EP 1989-810171	19890307
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	RO 103451	B1	19921115	RO 1989-138628	19890310
	FI 8901180	A	19890916	FI 1989-1180	19890313
	DD 283537	A5	19901017	DD 1989-326547	19890313
	PL 156391	B1	19920331	PL 1989-278186	19890313
	DK 8901231	A	19890916	DK 1989-1231	19890314
	NO 8901098	A	19890918	NO 1989-1098	19890314
	AU 8931291	A1	19890921	AU 1989-31291	19890314
	AU 608700	B2	19910411		
	CN 1035753	A	19890927	CN 1989-101360	19890314
	ZA 8901920	A	19891129	ZA 1989-1920	19890314
	JP 02015004	A2	19900118	JP 1989-61951	19890314
	HU 50266	A2	19900129	HU 1989-1225	19890314
	SU 1797459	A3	19930223	SU 1989-4613647	19890314
	BR 8901194	A	19891031	BR 1989-1194	19890315
PRAI	CH 1988-968	19880315			
	CH 1988-4673	19881219			

OS MARPAT 112:158237
GI For diagram(s), see printed CA Issue.
AB Title amides I [A = NR1R2, NR3NR4(CO)mR5; R1-R5 = H, (un)substituted (cyclo)alkyl, (cyclo)alkenyl, alkynyl, EmU, EmQ; NR1R2, NR4R5 = (un)substituted heterocyclyl; E = (un)substituted (un)interrupted alkylene or alkenylene; U = (un)substituted Ph or naphthyl; Q = heterocyclyl; m = 0, 1] were prepd. as herbicide antidotes for sulfonylureas, haloacetanilides, and aryloyphenoxypropionates. Thus, amidation of 2-chloro-4-trifluoromethylthiazole-5-carboxylic acid chloride with 1-cyano-1-methylaminocyclopentane in MeCN contg. Et3N gave 83% I (A = NR1R2, R1 = Me, R2 = 1-cyanocyclopent-1-yl) (II). At 8000 g/ha preemergence with an equal rate of metolachlor, II gave 70% protection of corn and no protection of Echinochloa crus-galli. A list of I, various formulations, and addnl. biol. data are given.
ST **thiazolecarboxamide** prepn herbicide antidote
IT Herbicide antidotes
(**thiazolecarboxamide** derivs.)
IT 72850-62-5
RL: RCT (Reactant)
(amidation of)
IT 55793-49-2
RL: RCT (Reactant)
(amidation of, with **thiazolecarbonyl** chloride deriv.)
IT 5329-12-4, 2,4,6-Trichlorophenylhydrazine
RL: RCT (Reactant)
(condensation of, with **thiazolecarbonyl** chloride deriv.)
IT 15972-60-8 51218-45-2, Metolachlor 51218-49-6, Pretilachlor 75942-79-9, Trimexachlor 92080-03-0 126048-63-3
RL: RCT (Reactant)
(herbicide antidotes for)
IT 72850-84-1P 117413-56-6P 117545-74-1P 117546-07-3P 117546-08-4P 117546-09-5P 117546-10-8P 117546-11-9P 117546-12-0P 117546-13-1P 117546-14-2P 117546-15-3P 117546-16-4P 117546-18-6P 117546-19-7P 117546-20-0P 117546-21-1P 117546-22-2P 117546-23-3P 117546-26-6P 117546-27-7P 117546-29-9P 117546-30-2P 117546-31-3P 117546-32-4P 117546-34-6P 117546-35-7P 117546-36-8P 117546-37-9P 117546-38-0P 117546-39-1P 117546-40-4P 117546-41-5P 117546-42-6P 117546-43-7P 117546-44-8P 117546-45-9P 126048-56-4P 126048-57-5P 126048-58-6P 126048-59-7P 126048-60-0P 126048-61-1P 126048-62-2P 126069-48-5P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as herbicide antidote)

L7 ANSWER 32 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1989:407393 CAPLUS
DN **111:7393**
TI Preparation of 5-**thiazolecarboxamides** as plant fungicides
IN Wilson, John Robert Howe; Haddock, Ernest
PA Shell Internationale Research Maatschappij B. V., Neth.
SO Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D277-56
ICS A01N043-78
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 296673	A1	19881228	EP 1988-201227	19880615
EP 296673	B1	19940309		

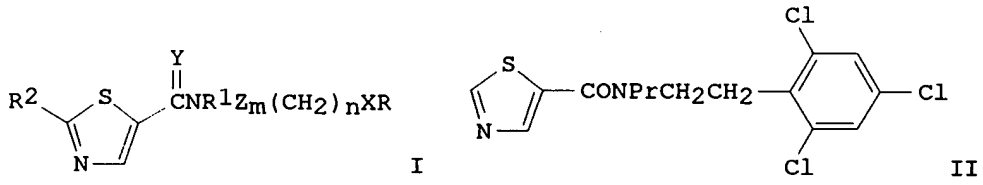
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE

	US 4877802	A	19891031	US 1988-199430	19880527
	CA 1328867	A1	19940426	CA 1988-568279	19880601
	AT 102611	E	19940315	AT 1988-201227	19880615
	ES 2061628	T3	19941216	ES 1988-201227	19880615
	DK 8803467	A	19881226	DK 1988-3467	19880623
	DK 169743	B1	19950213		
	AU 8818329	A1	19890105	AU 1988-18329	19880623
	AU 615658	B2	19911010		
	JP 01026572	A2	19890127	JP 1988-153706	19880623
	CN 1033626	A	19890705	CN 1988-103766	19880623
	CN 1022015	B	19930908		
	SU 1579458	A3	19900715	SU 1988-4355953	19880623

PRAI GB 1987-14920 19870625
EP 1988-201227 19880615

OS MARPAT 111:7393

GI



I II

AB The title compds. [I; R = (un)substituted aryl; R1 = H, (un)substituted alkyl, alkenyl, alkynyl; R2 = H, halo, (halo)alkyl, (halo)alkoxy, alkylthio, OH, cyano, NO2, NH2, (di)alkylamino, morpholino; X = O, S, CO, R4R5C; R4, R5 = H, alkoxy; Y = O, S; Z = C6H4; n = 0, 6; m = 0, 1] and their acid salts and metal complexes were prepd. as fungicides for plant protection. Me 2-amino-5-**thiazolecarboxylate** (79 g) was refluxed with Me(CH2)4ONO in dioxane to give 32.0 g Me 5-**thiazolecarboxylate** which (15 g) was sapond. to give 12.1 g free acid. The latter (4.8 g) was converted to its acid chloride and treated with 10.7 g N-[2-(2,4,6-trichlorophenoxy)ethyl] propylamine (prepn. given) in pyridine to give 8.6 g title compd. II. At 1 kg/ha II gave >80% control of, e.g., Leptosphaeria noderum on wheat and Pyricularia oryzae on rice.

ST **thiazolecarboxamide** prepn agrochem fungicide

IT Fungicides and Fungistats
(agrochem., (phenylalkyl)**thiazolecarboxamides**)

IT 107-10-8, Propylamine, reactions
RL: RCT (Reactant)
(alkylation of, by (bromoethoxy)trichlorobenzene)

IT 110-78-1, Propyl isocyanate
RL: RCT (Reactant)
(carbamoylation by, of chlorothiazole)

IT 3034-52-4, 2-Chlorothiazole
RL: RCT (Reactant)
(carbamoylation of, by Pr isocyanate)

IT 6633-61-0, Methyl 2-amino-5-**thiazolecarboxylate**
RL: RCT (Reactant)
(diazotization and deamination of)

IT 98-60-2, 4-Chlorobenzenesulfonyl chloride
RL: RCT (Reactant)
(esterification by, of (chlorophenoxy)ethanol)

IT 96-49-1, Ethylene carbonate
RL: RCT (Reactant)
(etherification by, of chlorophenol)

IT 25620-62-6, Dibromoethane

RL: RCT (Reactant)
(etherification by, of trichlorophenol, in prepn. of agrochem. fungicide)

IT 88-06-2, 2,4,6-Trichlorophenol
RL: RCT (Reactant)
(etherification of, by dibromoethane)

IT 106-48-9, 4-Chlorophenol
RL: RCT (Reactant)
(etherification of, by ethylene carbonate)

IT 26378-23-4P, 2-(2-Bromoethoxy)-1,3,5-trichlorobenzene
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and alkylation by, of propylamine, in prepn. of agrochem. fungicide)

IT 67747-01-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and amidation by, of **thiazole** carboxylate, in prepn. of agrochem. fungicides)

IT 14527-41-4P, 5-**Thiazolecarboxylic** acid
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and amidation of,in prepn. of agrochem. fungicide)

IT 1892-43-9P, 2-(4-Chlorophenoxy)ethanol
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and esterification of, by chlorobenzenesulfonyl chloride)

IT 14527-44-7P, Methyl 5-**thiazolecarboxylate** 41125-73-9P, 5-**Thiazolecarbonyl** chloride
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and sapon. of)

IT 121046-39-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and N-alkylation by, of **thiazolecarboxamides**, in prepn. of agrochem. fungicides)

IT 121046-38-6P, N-Propyl-5-**thiazolecarboxamide**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and N-alkylation of, in prepn. of agrochem. fungicides)

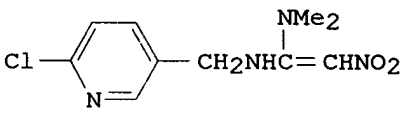
IT 121045-99-6P 121046-00-2P 121046-01-3P 121046-02-4P 121046-03-5P
121046-04-6P 121046-05-7P 121046-06-8P 121046-07-9P 121046-08-0P
121046-09-1P 121046-10-4P 121046-11-5P 121046-12-6P 121046-13-7P
121046-14-8P 121046-15-9P 121046-16-0P 121046-17-1P 121046-18-2P
121046-19-3P 121046-20-6P 121046-21-7P 121046-22-8P 121046-23-9P
121046-24-0P 121046-25-1P 121046-26-2P 121046-27-3P 121046-28-4P
121046-29-5P 121046-30-8P 121046-31-9P 121046-32-0P 121046-33-1P
121046-34-2P 121046-35-3P 121046-36-4P 121046-37-5P 121055-23-0P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as agrochem. fungicide)

L7 ANSWER 33 OF 33 CAPLUS COPYRIGHT 1999 ACS
AN 1989:231447 CAPLUS
DN **110:231447**
TI Alpha-unsaturated amines, particularly 1,1-diamino-2-nitroethylene derivatives, their insecticidal/miticidal compositions, and processes for their preparation
IN Minamida, Isao; Iwanaga, Koichi; Okauchi, Tetsuo
PA Takeda Chemical Industries, Ltd., Japan
SO Eur. Pat. Appl., 118 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D213-36
ICS C07D213-74; C07D215-12; C07D277-38; C07D213-71; C07D277-28; C07D277-32; C07D213-61; A01N043-40; A01N043-42; A01N043-78
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 5, 28
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 302389	A2	19890208	EP 1988-112210	19880728
	EP 302389	B1	19931222		
	EP 302389	A3	19900131		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	IN 167709	A	19901208	IN 1988-MA493	19880712
	EP 529680	A2	19930303	EP 1992-115873	19880720
	EP 529680	A3	19930714		
	EP 529680	B1	19980513		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	EP 509559	A2	19921021	EP 1992-111470	19880728
	EP 509559	A3	19930630		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	IL 87250	A1	19930610	IL 1988-87250	19880728
	AT 98955	E	19940115	AT 1988-112210	19880728
	ES 2061569	T3	19941216	ES 1988-112210	19880728
	IL 100688	A1	19950831	IL 1988-100688	19880728
	AT 166051	E	19980515	AT 1992-115873	19880728
	US 5849768	A	19981215	US 1988-225367	19880728
	HU 53909	A2	19901228	HU 1988-4040	19880729
	HU 204496	B	19920128		
	HU 205076	B	19920330	HU 1990-722	19880729
	CN 1031079	A	19890215	CN 1988-104801	19880801
	CN 1027447	B	19950118		
	JP 02000171	A2	19900105	JP 1988-192383	19880801
	JP 07014916	B4	19950222		
	US 5175301	A	19921229	US 1989-406515	19890913
	IN 170790	A	19920523	IN 1990-MA378	19900516
	US 5214152	A	19930525	US 1991-655072	19910214
	JP 05345760	A2	19931227	JP 1993-8114	19930121
	JP 05345761	A2	19931227	JP 1993-8115	19930121
	JP 05345774	A2	19931227	JP 1993-8116	19930121
	JP 07049424	B4	19950531		
	CN 1091737	A	19940907	CN 1993-114205	19931105
	CN 1093083	A	19941005	CN 1993-114206	19931105
	CN 1036649	B	19971210		
	JP 07206820	A2	19950808	JP 1994-254221	19940926
	JP 2551392	B2	19961106		
	JP 07224036	A2	19950822	JP 1994-254222	19940926
	JP 2551393	B2	19961106		
	US 5935981	A	19990810	US 1997-957749	19971024
PRAI	JP 1987-192793	19870801			
	JP 1987-258856	19871013			
	JP 1988-16259	19880126			
	JP 1988-64885	19880317			
	IN 1988-MA493	19880712			
	EP 1988-112210	19880728			
	IL 1988-87250	19880728			
	US 1988-225367	19880728			
	US 1989-406515	19890913			

OS MARPAT 110:231447

GI



II

AB Title compds. X1X2C:CR1NR2(CnH2n)A [I; 1 of X1 or X2 = electron-attracting group, other = H or electron-attracting group; R1 = group attached through

a N atom; R2 = H, group attached through a C, N, or O atom; n = 0-2; A = heterocyclyl; R1 = (un)substituted NH2 when R2 = H] are prepd. as insecticides and miticides. Aminolysis of (MeS)2C:CHNO2 by Me2NH in refluxing aq. EtOH gave Me2N(MeS)C:CHNO2, which underwent a 2nd aminolysis by 6-chloro-3-pyridylmethylamine in refluxing EtOH to give [(chloropyridylmethyl)amino](dimethylamino)nitroethylene II. At 500 ppm (spray) on rice seedlings, II gave 100% mortality of larval Nilaparvata lugens in 7 days.

ST pyridylmethylaminonitroethylene prepn insecticide miticide; **thiazolylmethylaminonitroethylene** prepn insecticide acaricide; nitroethylene heterocyclylmethylamino prepn insecticide miticide

IT Acaricides
Insecticides
((heterocyclylmethylamino)nitroethylenes)

IT 3000-75-7P, N-Ethyl-N-(3-pyridylmethyl)amine 3364-76-9P, 4-Chloromethylthiazole 4226-36-2P, 2-(3-Pyridyl)ethyl chloride hydrochloride 6971-44-4P, N-Methyl-N-(4-pyridylmethyl)amine 7032-20-4P 16273-55-5P 19690-13-2P 19730-13-3P, N-Propyl-N-(3-pyridylmethyl)amine 20173-04-0P 20173-12-0P, N-Butyl-N-(3-pyridylmethyl)amine 21035-59-6P, N-Methyl-N-(2-pyridylmethyl)amine 21543-49-7P 23879-54-1P 31982-51-1P 34107-46-5P, 6-Methyl-3-pyridylmethanol 37669-64-0P, 5-Bromo-3-pyridylmethanol 38663-85-3P, 2-Methoxyethyl isothiocyanate 39204-47-2P, 2-Chloromethylpyrazine 39620-02-5P, 5-Bromonicotinoyl chloride 42330-59-6P, 2-Chloro-3-pyridylmethanol 42506-12-7P 49609-84-9P, 2-Chloronicotinoyl chloride 52426-66-1P, 6-Methyl-3-pyridylmethyl chloride 55019-90-4P 59670-91-6P, 1,1-Dimethyl-2-(3-pyridylmethylidene)hydrazine 61771-67-3P, 2-Methoxy-5-methylaminopyridine 61832-41-5P 62658-90-6P, 2-Methylthio-3-pyridylmethanol 63326-08-9P 63361-56-8P, N-Benzyl-N-(3-pyridylmethyl)amine 66171-50-4P 70258-18-3P 71718-88-2P, N-(3-Pyridylmethylidene)benzylamine 73335-64-5P, N-(5-Bromo-3-pyridylmethyl)-N-methylamine 73781-91-6P, Methyl 6-chloronicotinate 82674-16-6P 89581-84-0P, 2-Chloro-3-pyridylmethyl chloride 97004-04-1P 97936-43-1P 101990-45-8P, 6-Bromo-3-pyridylmethyl bromide 105827-74-5P, 6-Fluoro-3-pyridylmethyl bromide 109859-96-3P 120277-69-2P, 5-Bromo-3-pyridylmethyl chloride 120739-60-8P 120739-61-9P 120739-62-0P 120739-63-1P 120739-64-2P, N-(3-Pyridylmethylidene)ethylamine 120739-65-3P, N-(3-Pyridylmethylidene)-2-methoxyethylamine 120739-66-4P, N-(3-Quinolylmethylidene)methylamine 120739-67-5P, N-(3-Pyridylmethylidene)-n-propylamine 120739-68-6P 120739-69-7P, N-Methyl-N-(3-quinolylmethyl)amine 120739-70-0P, 1,1-Dimethyl-2-(3-pyridylmethyl)hydrazine 120739-71-1P, 2,2-Dichloro-3-pyridylmethylamine 120739-72-2P, N-(2,6-Dichloro-3-pyridylmethyl)phthalimide 120739-73-3P, N-(2,6-Dichloro-3-pyridylmethyl)-N-methylamine 120739-74-4P 120739-75-5P 120739-76-6P 120739-77-7P, N-(6-Chloro-3-pyridylmethyl)-N-ethylamine 120739-78-8P 120739-79-9P 120739-80-2P 120739-81-3P 120739-82-4P 120739-83-5P, N-(6-Chloro-3-pyridylmethyl)-N-isopropylamine 120739-84-6P, 2-Chloro-5-methylaminopyridine 120739-85-7P 120739-86-8P, N-(2,6-Dimethyl-4-pyridylmethyl)-N-methylamine 120739-87-9P, 2,6-Dimethyl-4-pyridylmethyl chloride 120739-88-0P, N-(2-Chloro-3-pyridylmethyl)-N-methylamine 120739-90-4P 120739-91-5P 120739-92-6P, N-(2-Methylthio-3-pyridylmethyl)-N-methylamine 120739-93-7P 120739-94-8P 120739-95-9P 120739-96-0P 120739-97-1P 120739-98-2P 120739-99-3P 120740-00-3P 120740-01-4P 120740-02-5P, N-Methyl-N-(6-methyl-3-pyridylmethyl)amine 120740-03-6P, N-(6-Fluoro-3-pyridylmethyl)-N-methylamine 120740-04-7P, N-(6-Bromo-3-pyridylmethyl)-N-methylamine 120740-05-8P, N-(6-Bromo-3-pyridylmethyl)-N-ethylamine 120740-06-9P, N-(2-Chloro-5-

(prepn. of, as insecticide and miticide)

IT 57-06-7, Allyl isothiocyanate 57-14-7, 1,1-Dimethylhydrazine 74-88-4, reactions 74-89-5, Methylamine, reactions 75-04-7, Ethylamine, reactions 75-15-0, Carbon disulfide, reactions 75-52-5, Nitromethane, reactions 78-39-7, Ethyl orthoacetate 79-22-1, Methyl chloroformate 85-41-6, Phthalimide 107-10-8, n-Propylamine, reactions 109-08-0, 2-Methylpyrazine 109-85-3, 2-Methoxyethylamine 110-89-4, Piperidine, reactions 115-80-0, Triethyl orthopropionate 122-51-0, Ethyl orthoformate 124-40-3, Dimethylamine, reactions 124-41-4, Sodium methoxide 373-88-6, 2,2,2-Trifluoroethylamine hydrochloride 500-22-1, Pyridine-3-aldehyde 542-85-8, Ethyl isothiocyanate 556-61-6, Methyl isothiocyanate 592-82-5 593-56-6, O-Methylhydroxylamine hydrochloride 622-78-6, Benzyl isothiocyanate 624-83-9, Methyl isocyanate 626-35-7, Ethyl nitroacetate 628-30-8, n-Propyl isothiocyanate 693-95-8 872-85-5, Pyridine-4-aldehyde 1074-82-4, Potassium phthalimide 1121-60-4, Pyridine-2-aldehyde 1424-54-0, Methanesulfonyl isothiocyanate 2253-73-8, Isopropyl isothiocyanate 2258-42-6, Formic acetic anhydride 2369-19-9, 2-Fluoro-5-methylpyridine 2942-59-8, 2-Chloronicotinic acid 3430-14-6 3510-66-5 3731-52-0, 3-Pyridylmethylamine 5006-66-6, 6-Hydroxynicotinic acid 5350-93-6, 5-Amino-2-chloropyridine 5470-70-2, Methyl 6-methylnicotinate 6142-06-9, 2-Methylaminothiazole 6293-56-7, 2-(3-Pyridyl)ethanol 6628-77-9, 5-Amino-2-methoxypyridine 6638-79-5, N,O-Dimethylhydroxylamine hydrochloride 6959-48-4, 3-Pyridylmethyl chloride hydrochloride 7664-41-7, Ammonia, reactions 7803-57-8, Hydrazine hydrate 13623-94-4, 1,1-Bis(methylthio)-2-nitroethylene 13669-42-6, 3-Quinolinecarboxaldehyde 18088-01-2, 2,6-Dimethyl-4-pyridylmethanol 18364-47-1, 3-Methylaminopyridine 20826-04-4, 5-Bromonicotinic acid 23100-12-1 41789-37-1, 2,6-Dichloro-3-pyridylmethyl chloride 43083-12-1, Trimethyl orthobutyrate 61832-41-5, 1-Methylamino-1-methylthio-2-nitroethylene 74470-23-8 90875-71-1 101990-45-8, 6-Bromo-3-pyridylmethyl bromide 105827-91-6, 2-Chloro-5-chloromethylthiazole 112110-07-3, 3-Amino-5-trifluoromethylpyridine 120739-84-6 120740-65-0 120741-33-5
RL: RCT (Reactant)
(reaction of, in prepn. of insecticides and miticides)

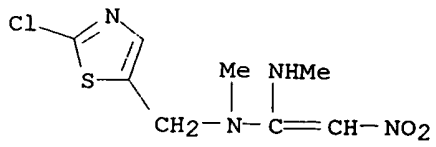
thiazolylmethyl)-N-methylamine 120740-07-0P 120740-08-1P
120740-09-2P, N-(2-Chloro-5-**thiazolylmethyl**)phthalimide
120740-10-5P 120740-11-6P 120740-12-7P,
N-(6-Chloro-3-pyridylmethyl)-N-
(2,2,2-trifluoroethyl)amine 120740-13-8P 120740-14-9P 120740-15-0P
120740-16-1P 120740-17-2P 120740-18-3P 120740-19-4P 120740-20-7P
120740-21-8P 120740-22-9P 120740-23-0P 120740-24-1P 120740-25-2P
120740-26-3P 120740-27-4P 120740-28-5P 120740-29-6P 120740-30-9P
120740-31-0P 120740-32-1P 120740-33-2P 120740-34-3P 120740-35-4P
120740-36-5P 120740-37-6P 120740-38-7P 120740-39-8P 120740-40-1P
120740-41-2P 120740-42-3P 120740-43-4P 120740-44-5P 120740-45-6P
120740-46-7P 120740-47-8P 120740-48-9P 120740-49-0P 120740-50-3P
120740-51-4P 120740-52-5P 120740-53-6P 120740-54-7P 120740-55-8P
120740-56-9P 120740-57-0P 120740-58-1P 120740-59-2P 120740-60-5P
120740-61-6P 120740-62-7P 120740-63-8P 120740-64-9P 120740-65-0P
120740-66-1P 120740-67-2P 120740-68-3P 120740-69-4P 120740-70-7P
120740-71-8P 120740-72-9P 120740-73-0P 120740-74-1P 120740-75-2P
120740-76-3P 120740-77-4P 120740-78-5P 120740-79-6P 120740-80-9P
120740-81-0P 120740-82-1P 120740-83-2P 120740-84-3P 120740-85-4P
120740-86-5P 120740-87-6P 120740-88-7P 120740-89-8P 120740-90-1P
120740-91-2P 120740-92-3P 120740-93-4P 120740-94-5P 120740-95-6P
120740-96-7P 120740-97-8P 120740-98-9P 120740-99-0P 120741-00-6P
120741-01-7P 120741-02-8P 120741-03-9P 120741-04-0P 120741-05-1P
120741-06-2P 120741-07-3P 120741-08-4P 120741-09-5P 120741-10-8P
120741-11-9P 120741-12-0P 120741-13-1P 120741-14-2P 120741-15-3P
120741-16-4P 120741-17-5P, 6-Chloro-3-pyridylmethyl isothiocyanate
120741-18-6P 120741-19-7P 120741-20-0P 120741-21-1P 120741-22-2P
120741-23-3P 120741-24-4P, 6-Bromo-3-pyridylmethyl isothiocyanate
120741-25-5P 120741-26-6P 120741-27-7P 120741-28-8P 120741-29-9P
120741-30-2P 120741-31-3P 120741-32-4P 120770-88-9P 120770-89-0P
120770-90-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of insecticides and miticides)

IT 120741-34-6P 120741-35-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

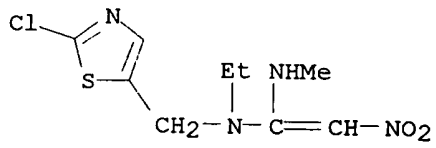
IT 90787-25-0P 120738-33-2P 120738-34-3P 120738-35-4P 120738-36-5P
120738-37-6P 120738-38-7P 120738-39-8P 120738-40-1P 120738-41-2P
120738-42-3P 120738-43-4P 120738-44-5P 120738-45-6P 120738-46-7P
120738-47-8P 120738-48-9P 120738-49-0P 120738-50-3P 120738-51-4P
120738-52-5P 120738-53-6P 120738-54-7P 120738-55-8P 120738-56-9P
120738-57-0P 120738-58-1P 120738-59-2P 120738-60-5P 120738-61-6P
120738-62-7P 120738-63-8P 120738-64-9P 120738-65-0P 120738-66-1P
120738-67-2P 120738-68-3P 120738-69-4P 120738-70-7P 120738-71-8P
120738-72-9P 120738-73-0P 120738-74-1P 120738-75-2P 120738-76-3P
120738-77-4P 120738-78-5P 120738-79-6P 120738-80-9P 120738-81-0P
120738-82-1P 120738-83-2P 120738-84-3P 120738-85-4P 120738-86-5P
120738-87-6P 120738-88-7P 120738-89-8P 120738-90-1P 120738-91-2P
120738-92-3P 120738-93-4P 120738-94-5P 120738-95-6P 120738-96-7P
120738-97-8P 120738-98-9P 120738-99-0P 120739-00-6P 120739-01-7P
120739-02-8P 120739-03-9P 120739-04-0P 120739-05-1P 120739-06-2P
120739-07-3P 120739-08-4P 120739-09-5P 120739-10-8P 120739-11-9P
120739-12-0P 120739-13-1P 120739-14-2P 120739-15-3P 120739-16-4P
120739-17-5P 120739-18-6P 120739-19-7P 120739-20-0P 120739-21-1P
120739-22-2P 120739-23-3P 120739-24-4P 120739-25-5P 120739-26-6P
120739-27-7P 120739-28-8P 120739-29-9P 120739-30-2P 120739-31-3P
120739-32-4P 120739-33-5P 120739-34-6P 120739-35-7P 120739-36-8P
120739-37-9P 120739-38-0P 120739-39-1P 120739-40-4P 120739-41-5P
120739-42-6P 120739-43-7P 120739-44-8P 120739-45-9P 120739-46-0P
120739-47-1P 120739-48-2P 120739-49-3P 120739-50-6P 120739-51-7P
120739-52-8P 120739-53-9P 120739-54-0P 120739-55-1P 120739-56-2P
120739-57-3P 120739-58-4P 120739-59-5P 120741-36-8P,
1,1-Bis[(3-pyridylmethyl)amino]-2-nitroethylene 120741-37-9P
120770-85-6P 120770-86-7P 120770-87-8P
RL: SPN (Synthetic preparation); PREP (Preparation)

```
=> s l3

L4          64 L3

=> s l4 and process

       1206643 PROCESS
L5           4 L4 AND PROCESS

=> s l4 and halogen?

         93976 HALOGEN?
L6           0 L4 AND HALOGEN?

=> d l5 1-4 ibib ab hitstr


L5   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 1999 ACS
ACCESSION NUMBER:         1999:609863  CAPLUS
DOCUMENT NUMBER:          131:253657
TITLE:                    Discovery of a new systemic insecticide, nitenpyram
                          and its insecticidal properties
AUTHOR(S):                Akayama, Atsuo; Minamida, Isao
CORPORATE SOURCE:         Agricultural Research Laboratories, Agro Company,
                          Takeda Chemical Industries, Ltd., Tsukuba, 300-42,
                          Japan
SOURCE:                   Nicotinoid Insectic. Nicotinic Acetylcholine Recept.,
                          [Symp.] (1999), Meeting Date 1997, 127-148.
                          Editor(s): Yamamoto, Izuru; Casida, John E.
Springer:
                          Tokyo, Japan.
                          CODEN: 68EFAV
DOCUMENT TYPE:            Conference
LANGUAGE:                 English
AB   A large no. of nitromethylene heterocyclic compds. were screened against
     Nilaparvata lugens and the Nephotettix cincticeps. Nitenpyram was
     discovered in the process of the optimization of the
     substituents of an acyclic nitroethene.  The compd. maintains poor
     photostability; however, it shows excellent residual effect against rice
     hoppers and aphids by foliar spray.  The poor photostability of
nitenpyram
     is considered to be advantageous for environmental safety and for
     minimization of th resurgence of the phytophagous mite and adverse
effects
     against beneficial insects.  Nitenpyram is highly sol. in water, and
shows
     excellent systemic action and no phytotoxicity, which characteristics
     enable the various application methods of the compd.  The compd. has been
     developed for controlling the brown planthopper, however, it is highly
     active against some other pest species, and single soil application of
     nitenpyram effectively controls aphids, whiteflies, trips, and the
     serpentine leaf miner, which are the major greenhouse pests difficult to
     control by conventional insecticides.
IT   120739-30-2 120739-31-3
     RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
        (insecticidal activity against Nilaparvata lugens and Nephotettix
        cincticeps)
RN   120739-30-2  CAPLUS
CN   1,1-Ethenediamine,
N-[(2-chloro-5-thiazolyl)methyl]-N,N'-dimethyl-2-nitro-
```

(9CI) (CA INDEX NAME)



RN 120739-31-3 CAPLUS
CN 1,1-Ethenediamine, N-[(2-chloro-5-thiazolyl)methyl]-N-ethyl-N'-methyl-2-nitro- (9CI) (CA INDEX NAME)



L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER: 1998:668115 CAPLUS
DOCUMENT NUMBER: 129:290052
TITLE: **Process** for the preparation of nitroguanidine derivatives starting from 2-nitroiminohexahydro-1,3,5-triazines in the presence of ammonia, primary or secondary amines
INVENTOR(S): Ebihara, Koichi; Ura, Daisuke; Miyamoto, Michihiko; Kaiho, Tatsuo
PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 869120	A1	19981007	EP 1998-105850	19980331
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CN 1197064	A	19981028	CN 1998-108267	19980331
JP 11236381	A2	19990831	JP 1998-86842	19980331
PRIORITY APPLN. INFO.:			JP 1997-80178	19970331
			JP 1997-82838	19970401
			JP 1997-223813	19970820
			JP 1997-258968	19970924
			JP 1997-347934	19971217

OTHER SOURCE(S): MARPAT 129:290052
AB Described is a **process**, as a substitute for hydrolysis, for prepg. a nitroguanidine deriv., RCH2NHC(:NNO2)NHR2 (R = 2-chloro-5-pyridyl, 2-chloro-5-thiazolyl, 2-, 3-tetrahydrofuryl, 2-methyl-4-tetrahydrofuryl; R2 = Me, allyl), which comprises treating a triazine, I (R1 = Me, benzyl, i-Pr, Et, t-Bu, cyclohexyl; R, R2 = same as above), with NH3, a primary amine or a secondary amine, or a salt thereof.
IT **131748-59-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 131748-59-9 CAPLUS
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro- (9CI)